



PRADHAN INDUSTRIES

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Ref. NoPI/MC/BAS-DRP/ 227 /2019

Date10.01.2019..

To

The Divisional Forest Officer,
Rayagada Division.
Rayagada (Odisha)

Sub: "In Principle" approval of diversion of 44.038 ha of Forest land within ML area of Bainibasa Graphite Mines of M/s Pradhan Industries, approved vide order of MoEF & CC, New Delhi

- *Submission of Compliance for Final approval u/s 2 of the Forest (Conservation) Act'1980.*

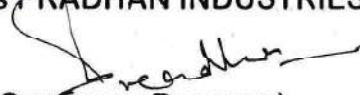
Ref: Stage - I Approval Letter No.: 8-58/2017/FC, Dtd. 22.01.2018

Sir,

In inviting a reference to the above cited subject and letter under reference, the point wise compliance as stipulated in the conditions and as indicated in the order No 8-58/2017/FC, Dtd. 22.01.2018 of MoEF&CC, New Delhi are being submitted here with in form of Six Sets for necessary consideration & for onward transmission to accord Final approval u/s 2 of the Forest (Conservation) Act'1980 over an area of 44.038 ha of Forest land within ML area of Bainibasa Graphite Mines of M/s Pradhan Industries, Cuttack.

This is for your information and necessary action. Your early action in the matter is solicited.

Yours faithfully,
For M/s PRADHAN INDUSTRIES,


(SUNANDAN PRADHAN)
PARTNER

Encl.: As above.

Copy to:

- (1) The Special Secretary to Govt., Department of Forest & Environment, Govt. of Odisha, Bhubaneswar, for your information & necessary action.
- (2) The Addl. PCCF (Nodal), Office of the PCCF (Nodal), Bhubaneswar, for your information & necessary action.
- (3) The RCCF, Koraput, for your information & necessary action.

Factory : At/P.O.-LAXMIPUR-765013, DIST - KORAPUT, ODISHA, PHONE : 06855-268524
AT-BANDHAMANDI, P.O.- SIKARPAI, DIST - RAYGADA-765 001, PHONE : 06856-212022
AT - BAINIBASA, P.O. - MUNIGUDA, DIST. - RAYGADA - 765020

PRADHAN INDUSTRIES

Telenga Bazar, Cuttack - 753009

Compliance to Stage-I Conditions stipulated by MoEF&CC, New Delhi for Diversion of 44.038ha of Forest land in Bainibasa Graphite Mine

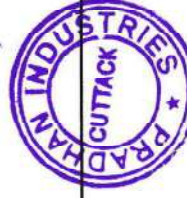
Condition No	Conditions	Compliance by the Project Proponent	Remark
i	Legal status of the Diverted forest land remain unchanged.	Undertaking to this effect is at <u>Annexure-I</u>	
ii	Safety belt of at least 7.5 m along the inner side of the total mining lease over 2.253ha (0.737 ha on Forest land and 1.516ha on non forest land) will be raised & maintained and no tree will be felled or ground vegetation cleared in the identified safety belt. In addition to the safety belt around the entire mining lease area, 50 m wide strip along Nala course measuring 9.20 ha (8.549 ha in forest and 0.651 ha in non-forest) will be maintained as green zone. 54 Nos of trees above 30 cm girth which have been enumerated in 9.286 ha of forest land coming within safety zone area will be preserved.	Undertaking to this effect is at <u>Annexure-II</u>	
iii	The Compensatory afforestation will be raised over the 43.30 ha (44.038-0.737) of non-forest land. Since the CA site identified is 34.753 ha only, the State Government shall submit details of additional 8.548 ha non forest land for Compensatory afforestation with shape files. The compensatory scheme shall be revised accordingly. The requisite details shall be submitted prior to stage II approval.	8.552ha of additional Compensatory Afforestation Land has been selected at Village Sindhupanga of Bissamcuttack Tahasil. The same has been allotted vide Letter No 395/XX-7/2018 dated 22.02.2018 of Tahasildar Bissamcuttack. Allotment letter is at <u>Annexure-III</u> . The KML shape file is attached in CD. The compensatory scheme has been revised and approved for Rs 1,17,61,000/-. Approval letter No.:12557/9F(MG)-367/2017, Dtd. 08.06.2018 is at <u>Annexure-IV</u> .	



Condition No	Conditions	Compliance by the Project Proponent	Remark
iv	As informed by the State Government out of 14.585 ha of non-forest land within mining lease, 2.167 ha will be maintained as safety zone and remaining 12.418 ha of private land shall not be utilized in any manner for the purpose of mining and related ancillary activities, except 0.081 ha for future Exploration & Utilization, and shall remain untouched. 86 no. of trees present on such land have been enumerated which are to be kept intact at project cost. Large number of local species will be planted over this non-forest land which is not under mining scheme. The details of such plantation will be provided to the DFO and the Regional office of the Ministry who will monitor such plantations.	Undertaking to this effect is at <u>Annexure-V</u> .	
v	Compensatory afforestation shall be raised over 43.30 ha of non-forest land equal to the diverted forest land and under bald hill plantation scheme recommended by the State Government, at least 1600 tall plants per hectare (43.3 hectares x 1000 = 69280 plants) shall be planted over identified non-forest land (43.3 ha) in pits of size 0.6m x 0.6m with provision for ten years of subsequent maintenance. If it is not possible to plant the above stated numbers of plants in the identified non-forest land then the balance are to be raised over degraded forest land as per working plan prescriptions.	43.312 ha of Govt. Non Forest Land for Compensatory Afforestation purpose has been selected/ alienated in favour of Forest Department vide letter no 2281/Alien RMC No-01/2018, Rev dated 03.12.2018 of Tahasildar Bissamcutoff. (<u>Annexure—VI</u>) The Total numbers of Plants to be planted as in CA scheme @1600 per hectars.	
vi	25% of revised CA cost will be deposited extra by the user agency for soil and moisture conservation (SMC) activities on the CA land.	25% of Afforestation cost is added for soil and moisture conservation (SMC) in the revised Compensatory Afforestation Scheme.	
vii	In compliance of the rule 41 of the Mineral Conservation and Development Rule, 1988 the restoration of flora in the entire lease area (58.704 ha) will be done in such a manner so as a. to cause least damage to the flora of the area held under prospecting license/mining lease and the nearby areas.	An undertaking is furnished at <u>Annexure-VII</u>	



Condition No	Conditions	Compliance by the Project Proponent	Remark
	b. take immediate measure for planting in the same area or any other area selected by the Controller General or the authorized officer not less than twice the number of trees destroyed by reason of any prospecting or mining operations; c. look after them during the subsistence of the license / lease after which these trees shall be handed over to the State Forest Department or any other authority as may be nominated by the Controller General or the authorized officer; and d. restore, to the extent possible, other flora destroyed by prospecting or mining operation.		
Viii	The details of such number if trees to be felled on forest as well as non-forest area in the lease and plantation of double the number of trees in the lease area or outside will be provided to the Divisional Forest Office, Rayagada and the Regional Office of the Ministry who will monitor such plantation efforts by the company.	An undertaking to this effect is furnished at <u>Annexure-VIII</u>	
ix	It is reported that the user agency had paid the NPV amount. The detail of deposit of NPV for the entire applied forest area amounting to Rs. 2,75,67,788 before execution of mining lease deed shall be submitted and verified from Ad hoc CAMPA before stage-II clearance.	The payment details for Rs 27567788/- is at <u>Annexure- IX.</u>	
x	For wildlife Conservation in the area, a Site-specific Wildlife Conservation Plan will be prepared as per guidelines of CWLW, Odisha & approved by PCCF (WL) & CWLW, Odisha, and will be implemented at project cost inside the ML area as well as in the Regional office of the Ministry. Besides, proportionate cost of Regional Wildlife Management Plan, as per revised rate prescribed by the State of Odisha in ML area basis, will also be deposited by the lessee for its implementation. The amount such deposited will be informed by the user agency to the Regional Office and CAMPA.	A site Specific wildlife conservation plan has been prepared and approved vide Order no 6798 dated-29.07.2017 of PCCF(WL) & CWLW, Odisha Bhubaneswar. (Copy at <u>Annexure-X</u>). The amount has also been deposited in CAMPA Fund. The cost of Regional Wildlife Management Plan has also been deposited in Campa Fund. Payment particulars is at Annexure- XI	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xi	The lessee has to carry out reclamation of the ML area as per the provision of the approved reclamation plan. Therefore, the lessee has to submit Phased reclamation Plan (as per provision of para 5.2(i) (a) of FC Act guidelines) for its implementation at project cost.	A plan has been approved by Regional CCF, Koraput vide letter no 3135/1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure- XII.</u>	
xii	Any change in the existing Mining Plan, as approved by the competent authority, will be compulsorily informed to the State Forest Department and the Regional Office before actual change on the ground. The State Government and the Regional office will examine and give concurrence / comments within a 30 working days from the date of submission with recommendation, if any, which will be binding on the user agency.	An undertaking to this effect is at <u>Annexure- XIII.</u>	
xiii	The FC approval will be coterminous with the lease period i.e. up to 50 years from date of execution of ML on 10.01.2017 or the date of closure of the mine whichever is earlier.	An undertaking to this effect is at <u>Annexure- XIV</u>	
xiv	Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the plan/scheme shall be deposited in AD-hoc CAMPA Account: (a) Mitigative measures to minimize soil erosion and choking of stream 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 the mining lease to arrest soil erosion is accord in accordance with the approved scheme; (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;	Five schemes have been prepared and approved by the Regional CCF, Koraput vide letter no 3135/1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure- XII.</u> An undertaking to implement the schemes is attached as <u>Annexure- XV</u>	



Condition No	Conditions	Compliance by the Project Proponent	Remark
	(d) Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure the angles of repose at any given place is less than 28° ; and (e) No damage shall be caused to the top-soil and the user agency will follow the top soil management plan.		
xiv	The land identified for the purpose of CA shall be clearly depicted on a Survey of India top sheet of 1:50,000 scale;	Initially selected CA land and additional CA land is depicted on Survey of India Topo Sheet no E44 F10 (65M/10) and copy at <u>Annexure-XVI</u>	
xv	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. The non-forest land identified for raising Compensatory Afforestation shall be notified by the State Government as RF 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 CA land selected over an area of 43.312ha has been mutated vide letter no 2281/Alien RMC No-01/2018, Rev.Dated 03.12.2018 of Tahasildar, Bissamcuttack in favour of forest department. (Copy at <u>Annexure- VI</u>) The draft notification has been submitted by the DFO, Rayagada to Add. PCCF (Nodal) vide memo no _____ dated _____. Copy at <u>Annexure-XVII</u> .	
xvi	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 is 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;	The approved cost for Compensatory Afforestation Rs 1,17,61,000/- (Rupees One Crore Seventeen lakh & Sixty One thousands only) has been deposited in the CAMPA Fund. The Receipt is at <u>Annexure- XVIII</u>	
xvii	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 the Hon'ble Supreme Court of India dated 28.03.2008, 24.04.2008 and 09.05.2008 in Write 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:	NPV has already been deposited in CAMPA Fund. The receipt is at <u>Annexure- IX</u>	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xviii	The user agency should ensure that the compensatory levies (CA cost, NPV, etc.) are deposited through challan generated online on web portal and deposited in appropriate bank online only. Amount deposited through other mode will not be accepted as compliance of the Stage-I clearance.	All dues / Demand related to Forest Diversion have been deposited online on web portal.	
xix	At the time of payment of the Net Present Value (NPV) at the 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 the Hon'ble Supreme Court of India.	An undertaking to pay the Additional NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India is at <u>Annexure-XIX</u> .	
xx	Fencing, protection and regeneration of the safety Zone area (7.5 meter strip shall be kept within the mining lease boundary and area of the safety zone shall be part of the total area of mining lease as per the Ministry's guidelines dated 27.05.2015) 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 done 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 Stage-II clearance and maintained thereafter in accordance with the approved Plan in consultation with the State Forest Department.	a) A Scheme for Fencing, protection and regeneration of the safety Zone area has been approved by RCCF, Koraput and to be implemented within three year at the project cost from the issue of Stage-II Clearance vide letter no 3135 / 1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure-XII</u>. b) A scheme has been approved for afforestation on degraded forest land (Jamarguda PRF) over 1 & ½ times i.e. 1.11 ha by RCCF, Koraput vide no 3135/1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure- XII</u>. The KML File is in a CD enclosed to this letter.	
xxi	Any fund received from the user agency under the project and deposited in the State Forest Department account, except the funds realize for regeneration/demarcation of safety zone, shall be transferred through online portal into Ad-hoc CAMPA account of the State Concerned;	All Demands deposited in CAMPA Fund as indicated above.	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xxii	The User Agency shall obtain the Environment Clearance as per the provisions of the Environmental (protection) Act, 1986, if required;	Environment Clearance has been obtained vide order No. J-11015/16/2017-IA.II (M) dated 23.04.2018 MoEF&CC, New Delhi. (<u>Annexure- XX</u>)	
xxiii	No labour camp shall be established on the forest land;		
xxiv	The User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas;	An undertaking to this effect is at <u>Annexure- XXI</u>	
xxv	The boundary of the diverted forest land, mining lease and safety zone, as applicable, shall be demarcated on ground at the project cost, by erecting four feet high reinforced cement concrete pillars, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates;	The boundary line of ML area, SZ area and Forest land has been demarcated on ground and pillars have been fixed. The GPS Coordinate has been written on it. An undertaking to maintain the same is at <u>Annexure- XXII</u>	
xxvi	The layout plan of the mining plan/proposal shall not be change without the prior approval of the Central Government;	An undertaking to this effect is at <u>Annexure- XXIII</u> .	
xxvii	The forest land proposed to be used for any purpose other than that specified in the proposal;	An undertaking to this effect is at <u>Annexure- XXIV</u> .	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xxviii	The forest land proposed to be diverted shall under no circumstances be transferred to any other agency, department or person without prior approval of the Central Government;	An undertaking to this effect is at Annexure- XXV.	
xxix	No damage to the flora and fauna of the adjoining area shall be caused;		
xxx	Any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;	An undertaking to this effect is at <u>Annexure-XXVI</u> .	
xxxi	The State Government shall complete settlement of rights, in terms of the Schedule 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;	The Rights of the Schedule Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 has already been settled and the required certificate has been issued by the Collector, Rayagada vide letter no 3472/17 Dated 14.09.2017. Copy is at <u>Annexure- XXVII</u>	
xxxii	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 100m. 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'	A scheme for gap planting and soil & moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 0.40), located in the area within 100m. from outer perimeter of the mining lease has been approved by the RCCF, Koraput vide RCCF, Koraput vide no 3135/1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure- XII</u> . It will be implemented by the Forest Department.	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xxxiii	The User Agency shall undertake mining in a phased manner after taking due care for 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 concern Addl. Principal Chief Conservator of Forest (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed.	An undertaking to this effect is at <u>Annexure- XXVIII.</u>	
xxxiv	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 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;	A Scheme has been approved by RCCF, Koraput vide Memo no 3135/1F (Project) 57/2018 Dated 06.10.2018 Copy at <u>Annexure- XII.</u> An undertaking to implement the scheme is at <u>Annexure-XXIX</u>	
xxxv	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 regularly;	An undertaking to submit the annual self compliance is at <u>Annexure-XXX</u>	
xxxvi	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 forest & wildlife;	An undertaking to abide by any other condition that may be stipulated from time to time, in the interest of conservation, protection and development of forest & wildlife by MoEF&CC, Regional Office, Bhubaneswar is at <u>Annexure-XXXI</u>	



Condition No	Conditions	Compliance by the Project Proponent	Remark
xxxvii	The user agency shall comply all the provision of the all Acts, Rules, Regulations, Guidelines, Hon'ble Court Order(s) and NGT order(s) pertaining to this project, if any, for the time being in force, as applicable to the project;	An undertaking to this effect is at <u>Annexure-XXXII</u> .	
xxxviii	Considering the initiation of mining in a virgin area / ecosystem hitherto undisturbed by mining activities, the user agency to conduct a study through a reputed/approved institution to ensure the status of (a) local flora, (b) local fauna (c) wildlife, (d) water bodies & streams in 5 KM area around, along with mitigative and ameliorative management.	A comprehensive status report to this effect is at <u>Annexure-XXXIII</u> .	

Encl.: Annexure No. : I to XXXIII

For M/s. PRADHAN INDUSTRIES
For **M/s. PRADHAN INDUSTRIES**



PARTNER
(Sunandan Pradhan)
PARTNER

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3	Scheme for Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion	C
4	Scheme for Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour of the mining lease area	D
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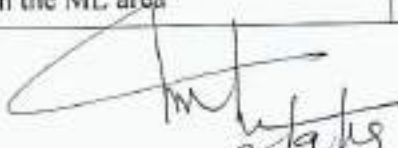
(UNDEERTAKINGS & DOCUMENTS)

Sl. No.	Description	Annexure No.
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6	Approval letter for Compensatory Afforestation including SMC (Memo No-13477 dt.30.07.2019 of PCCF, Odisha)	3 (d)
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8	Notification declaring CA land in Sanabudahada mouza as protected Forest under section 33 of OFA 1972 vide Notification No. 7877 dt 18.04.2019.	4(a)
9	Notification declaring CA land in Sikabandha mouza as protected Forest under section 33 of OFA 1972 vide Notification No. 7884 dt 18.04.2019	4(b)
10	Notification declaring CA land in Sindhapanga mouza as protected Forest under section 33 of OFA 1972 vide Notification No. 7899 dt 18.04.2019.	4(c)
11	Undertaking furnished by the User Agency to maintain safety zone, not to utilize private land, to keep 86 tree intact and to plant 0.081 ha with local species	5

12	Undertaking furnished by the User Agency (a) to cause least damage to the flora, to take immediate measure to plant twice the number of trees destroyed. (b) take immediate measures for planting in the same area or any other area selected by the Controller General or the authorized officer not less than twice the number of trees destroyed by reason of any prospecting or mining operations. (c) look after them during the subsistence of the license/lease after which these trees shall be handed over to the State Forest Department or any other authority as may be nominated by Controller General or the authorized officer; and (d) restore, to the extent possible, other flora destroyed by prospecting or mining operations.	6
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25	Undertaking furnished by the User Agency not to establish any labour camp on the forest land .	17
26	Undertaking furnished by the User Agency to provide fuels, preferably alternate fuels to the laborer's and staff.	18
27	Undertaking furnished by the User Agency to demarcate the boundary of the diverted forest land, mining lease and safety zone area, as applicable at the project cost.	19
28	Undertaking furnished by the User Agency not to change layout plan of the mining plan approved by the Central Government.	20
29	Undertaking furnished by the User Agency not to use the proposed forest land for any purpose other proposal.	21
30	Undertaking furnished by User Agency not to transfer the forest land proposed for diversion in no Circumstances to any other agency without prior approval of the Central Govt.	22
31	Undertaking furnished by the User Agency not to damage to the flora and fauna of the adjoining area.	23
32	Undertaking furnished by the User Agency that any tree felling shall be done only when if unavoidable and under strict supervision of the State Forest Department.	24
33	Certificate issued by the Collector, Rayagada for settlement of rights under ST & other Traditional Forest Dwellers (Recognition of Forest Right) Act 2006.	25
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37	Undertaking furnished by User Agency to abide by any other condition stipulated from time to time in the interest of conservation of forest & wildlife by MoEF& CC, Regional Office, Bhubaneswar.	29
38	Undertaking furnished by user agency to comply all acts and Rules, Regulations Guidelines, Hon'ble Court orders and NGT orders pertaining to the project	30

39	Letter No- 5-ORA300/2016-BHU dt.18.04.2019 of Regional Office, MoEF& CC, Bhubaneswar deleting condition No-xxxviii stipulated in their letter No-5-ORA300/2016-BHU dt. 7.3.2018	31
40	Undertaking furnished by User Agency that 9.286 ha of forest land will be maintained as safety zone and will not be used for mining and other allied activities.	32
41	Undertaking furnished by User Agency to undertake demarcation of the lease area on the ground posting four feet high cement concrete pillars embedded two feet inside the soil with serial number, forward and backward bearings, and distance from pillar to pillar and also to submit the map of lease area showing forest land using DGPS survey data and latitude and longitude of each pillar to the Divisional Forest Officer, Rayagada Division for his reference before commencement of work on final forest clearance Demarcation of the lease area on the ground posting for different works for using DGPS survey data .	33
42	CTE from SPCB vide their letter No- 159 dt. 17.01.2018	34
43	Undertaking furnished by user agency to submit CTO to the Govt. and all other concerned	35
44	Undertaking furnished by user agency not to break private land of 12.418 ha in the ML area	36


 Divisional Forest Officer,
 Rayagada Forest Division

45. Statement showing the payment details
 into Adhuc-Careed A/c



PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Ref. No

Date

UNDERTAKING BY USER AGENCY.

[Ref: Condition no (i) of Stage-I approval Order]

This is to undertake that the Legal status of the **Diverted Forest Land** will remain unchanged.

For M/s Pradhan Industries,

(Sunandan Pradhan)
PARTNER.

DIVISIONAL FOREST OFFICER
RAYGADA DIVISION



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 2

Ref. No

Date

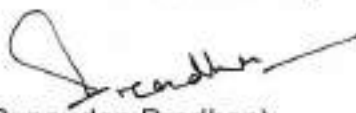
UNDERTAKING BY USER AGENCY.

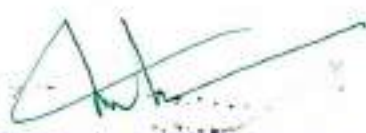
[Ref: Condition no (ii) of Stage-I approval Order]

This is to undertake that

- Safety belt of 7.5 m along the inner side of the total mining lease over 2.253ha (0.737 ha on Forest land and 1.516ha on non forest land) will be raised & maintained and no tree will be felled or ground vegetation cleared in the identified safety belt.
- Safety belt around the entire mining lease area and 50 m wide strip along Nala course measuring 9.20 ha (8.549 ha in forest and 0.651 ha in non-forest) will be maintained as green zone.
- 54 Nos of trees above 30 cm girth which have been enumerated in 9.286 ha of forest land coming within safety zone area will be preserved.
- The approved scheme on this aspect will be strictly followed and covered within 3 years from date of issue of Stage-II orders.

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

CHECK LIST SERIAL NUMBER: 18

**REVISED SCHEME FOR COMPENSATORY
AFFORESTATION**

**In lieu of Diversion of 44.038ha of Forest land
including 9.286ha in Safety Zone against Bainibasa
Graphite Mine of M/s Pradhan Industries, Cuttack**

**(Non Forest land selected for Compensatory
Afforestation - 43.312 ha)**

Block Plantation:	25.932 ha
Bald Hill Plantation:	17.38 ha
Total area for Compensatory Afforestation:	43.312 ha.

**By Divisional Forest Officer,
Rayagada Division.**

REVISED SCHEME FOR COMPENSATORY AFFORESTATION

1. Introduction:

The Steel & Mines Department has granted Bainibasa Graphite Mining Lease over an area of 58.704ha at Bainibasa, Tahasil: Muniguda, District Rayagada in favour of M/s Pradhan Industries, Cuttack. The ML area contains 44.038ha of Forest land. The Project Proponent has filed diversion proposal for 44.038ha of Forest land including 9.286ha forest land in safety zone. Initially 34.76ha of Non Forest land at village: Sanaburahara, and Sikabandha, Tahasil: Bissamkatak, District Rayagada was selected and allotted in favour of diversion of Forest land vide letter no 1282 dated 21.04.2017 of Tahasilcar, Bissamcuttack.

The "in Principle Approval" order issued by MoEF&CC, New Delhi vide order No F.No.8-58/2017-FC Dated 22.01.2018 where in under Para 2 (iii) of the said order an additional Govt. Non Forest Land to an extent of 8.548 ha is to be provided against diversion of 44.038ha of Forest land proposed for Diversion. The total non forest land required for Compensatory Afforestation is (44.038-0.737ha) 43.30ha

Initially 34.76 ha was identified for Compensatory Afforestation at Village Sanabudahada and Sikabandha under Bissamcuttack Tahasil (Patch-I) and additional Compensatory Afforestation land selected at village Sindhupanga over an area of 8.552 ha (patch-II)

As per instructions contained in the Stage-I approval order revised Compensatory Afforestation Scheme is prepared patch wise and consolidated thereafter.

Compensatory Afforestation Scheme for Patch-I. Area 34.76 ha

(Bald Hill Mode 17.38ha and Block Plantation Mode-17.38ha)

2. Details of Non-forest land allotted for Compensatory afforestation:

The land details of Non Forest area selected and allotted for compensatory afforestation is as follows.

District: Rayagada;

Tahasil : Bissamkalak.

Name of Forest Division: Rayagada, Range, Muniguda

Land Schedule:

Sl. No.	Village	Khata No.	Pct No.	Kissari	Area taken in Ac.	Total Pet Area in Ac.	Remark
1	Sanabudshada	23	106	Pahada	20.168	44.920	Initially selected and allotted vide letter no 1282 dated 21.04.2017 of Tahasildar, Bissamcuttack.
		25	107	Pahada	14.454	21.870	
		23	108	Pahada	26.325	41.600	
2	Sakabandha	26	313	Pahada	24.947	25.800	
	Total				85.894 Ac or say 34.76ha	154.19	

3. Description of Area

The land selected and allotted by the Collector, Rayagada comes within territorial jurisdiction of Muniguda Range under Divisional Forest Officer, Rayagada. The land is in one patch about 300meters away from Ghagurhipahar Proposed Reserved Forest.

Soil: The land is having a good soil depth to bear good and healthy vegetation. Soil is Red loamy with gravels. There is no remarkable erosion.

Topography: The land is with mixed topography of Plains with hillocks. The altitude of plains is about 360 MSL where as the highest hillock is of 420 MSL. The slope is partly gently to moderate and partly about 25° to 30°.

Climate: The area experiences a tropical climate. The average rainfall is 1400mm. summer is from March to June. The South west monsoon brings usual rain and most of the rainfall receives within July to October. Depression in Bay of Bengal brings wide spread rainfall to this region.

Vegetation: The selected area now bears thorny bushes with average height of 1- 1.5m. There are scattered trees of Sala, Mai, Bamboo culms. The area contains weeds and Eupatorium to a greater extent.

Biotic Interference.

Though the area is poorly populated, there is a tendency to practice Shifting Cultivation in the locality. The selected area has not been affected by "Shifting Cultivation". It is required to be vigilant against such destructive practices. There is also moderate grazing pressure in nearby forest.

Villages surrounding the area. The land is surrounded by village- Sanaburahara, Pipalpanga, Sikabandha & Balakupa.

The population in these villages is as given below.

Name	No_HH	TOT_H	TOT_M	TOT_F	P_SC	P_ST	Remarks
Sikabandha	67	297	145	152	68	229	Adjacent to 1 st patch
Pipalpanga	68	277	141	136	74	202	
Sanaburahara	10	32	15	16	0	0	
Balakupa	39	139	71	68	40	72	
Total	185	745	373	372	182	503	

The population is mainly SC & ST. General (8.05%), SC (24.43%) & ST (67.52%). There is availability of labour for any forestry operation.

4. Plantation Model:-

It is proposed to take up plantation in two model i.e.

- Block Plantation @1600 plants per hectare Over 17.38 ha.
- Bald Hill Plantation @1600 plants per hectare over 17.38 ha
- Soil & Moisture Conservation: 25% of Planting Cost.
- Barbed wire fencing over 3795 Rmt as per site condition.

4. Schedule of Plantation Programme:-

As the area is in two patches it is proposed to take up the plantation work in two consecutive year and subsequent maintenance as per approved cost norm. 1st patch will be taken up in 1st year and maintenance in subsequent year. The special Soil conservation measures to an extent of "an additional cost of 25% of the planting cost" are to be utilized as per condition number Para 7(vi) of the Stage-I order. The planting details summarized below

Sl No	Parameters / description	Description	
1	Mode	Block Plantation (Normal Model)	Block Plantation (Bald Hill mode)
2	No of Plants per Hectare	1600 no	1600 no
3	Total area to be planted in Hectare	17.38	17.38
4	Total number of Plants to be planted.	27808	27808
5	Spacing to be adopted	2.5m x 2.5m	2.5m x 2.5m

6	Fencing required	1897m	1898m
7	Wage Rate	Rs213.50	Rs213.50

The Cost norm for Block plantation and Bald Hill plantation is at Annexure I & II. The year wise flow of funds is as furnished below.

Year	Block Plantation over 17.38 ha		Bald Hill Plantation over 17.38 ha		Total Planting cost	Social SME measures @ 25% of Planting Cost	Barbed Wire Fencing Cost in lakh Rs.	Total amount in lakh Rs.
	Rate in Rs	Amount in lakh Rs	Rate in Rs	Amount in lakh Rs				
0 th	28435.00	4.072	74815.50	11.006	15.077	3.768	15.007	27.043
1 st yr	27740.35	3.674	65752.75	11.428	15.302	3.825		19.127
2 nd yr	12590.00	2.188	24033.50	4.201	6.469	1.617		8.087
3 rd yr	8752.00	1.521	12882.00	2.299	3.760	0.940		4.700
4 th yr	5843.00	0.666	11811.50	2.054	2.721	0.680		3.401
5 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
6 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
7 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
8 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
9 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
10 th yr	3843.00	0.468	7352.00	1.274	1.542			1.942
Total	91971.25	10.232	233835.25	40.651	55.983	11.322	15.007	84.013
FPA / VSI Activities in two villages @ Rs1.00 lakh each					2.00			2.00
S. Total								86.013
Contingent @ 20%								17.203
Total Cost								103.215

(Rupees One Crore Three lakh Twenty One thousand & Five hundred only)

5. Technical details:-

- General:** The plantation will be taken up in two models as stated above i.e. Block Plantation and Bald Hill Plantation mode. Under block plantation 17.38 ha will be covered which includes gentle plain land and moderate y sloopy areas. Land where the slope is higher i.e. above 25° it is proposed to take up plantation in Bald Hill mode (shown in the treatment map) over 17.38ha. The year wise activities to be implemented has been enumerated in the approved Cost norm at Annexure-I & II.
- Spacing:** The plant density proposed for planting is @1600 plants per ha. The spacing is 2.5mX2.5m which is generally adopted in this tract. It is suggested to have the line of planting along the contour and plant in adjacent row is staggered.

This will reduce the runoff and encourage percolation of water and enrichment of vegetation.

- c) **Choice of Species:** The suitable species for the site as indicated from the present vegetation is preferable drought hardy and pioneer species as per plant succession. Mostly Indigenous species will be planted up. In the plain / moderate slope species suggested are

1. *Artocarpus indica* (Neeru),
2. *Artocarpus heterophylla*,
3. *Bambusa cerba* (Sumiti)
4. *Cassia fistula* (Sunari)
5. *Dendrocalamus strictus* (Bamusha)
6. *Gmelina arborea* (Gumbhari)
7. *Mangifera indica* (Aamra)
8. *Peltandra ferocissima* (Rudra chuda)
9. *Phyllanthus emblica* (Amla)
10. *Pongamia pinnata* (Karanja)
11. *Sorbus samra* (Bada Chakunda)
12. *Syzygium cumini* (Jamun)
13. *Tamarindus indica* (Tantu)
14. *Terminalia tomentosa* (Ajan)
15. *Ziziphus mauritiana* (Bara kuli)
16. *Scaevola vahili* (Sali)
17. *Simarouba glauca* (Simaruba)
18. *Tectona grandis* (Sagun)

Towards uphill side and in Barren hill Plantation species of drier tract are to be preferred. These are

1. *Bambusa cerba* (Sumiti)
2. *Cassia fistula* (Sunari)
3. *Caesalpinia bonduca* (Gila)
4. *Gliricidia collina* (Koradu)
5. *Terminalia tomentosa* (Ajan)
6. *Ziziphus mauritiana* (Bara kuli)
7. *Ficus bengalensis* (Bera)
8. *Dendrocalamus strictus* (Bamusha)

d) Plantation Method.

d(i) Alignment, stacking and Pitting.

Alignment and stacking will be taken up in the month of January. Pits of size 30 cm x 30cm x 30cm are to be dugout with a spacing of 2.5mt x 2.5mt @1600 plants per hectare. In case of Bald Hill Plantation 60cmx60cmx60cm pits will be dugout as suggested under Condition No (v) of Stage-I Order. Alignment will be made along the contour stretch. It is also suggested to have plants staggered within adjacent rows to reduce runoff.

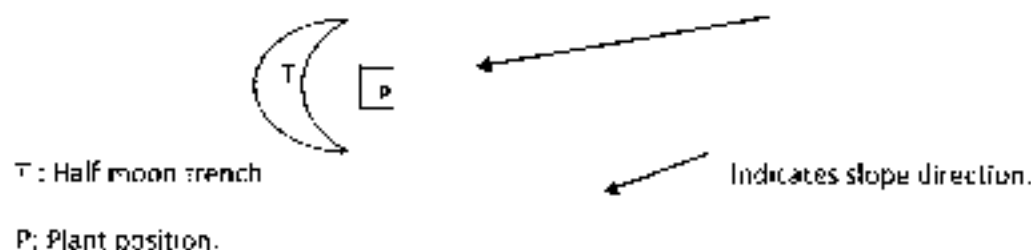
d(ii) Planting

Plantation will be done after first regular shower of monsoon and to be completed within a week. Basal dose of NPK/DAP fertilizer @30gm per plant to be given. Utmost care is to be taken to apply insecticides @5gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% casualty replacement is also suggested during 2nd Year.

d(iii) 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 during first year. Preferable Strip Weeding along the contour will be taken up. One weeding and soil working has to be done in second year and third year of plantation. Application of 30gms of NPK/DAP

to be added to the soil per plant at the time of soil working during rains during 1st & 2nd year of plantation. During second weeding, provision of Half Moon trench is suggested. This will also be repeated during 2nd year also. The design is furnished below



d(iv) Application of Insecticide:

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. Folar spraying of insecticide may be done if badly necessary.

d(v) Fire line tracing and maintenance:

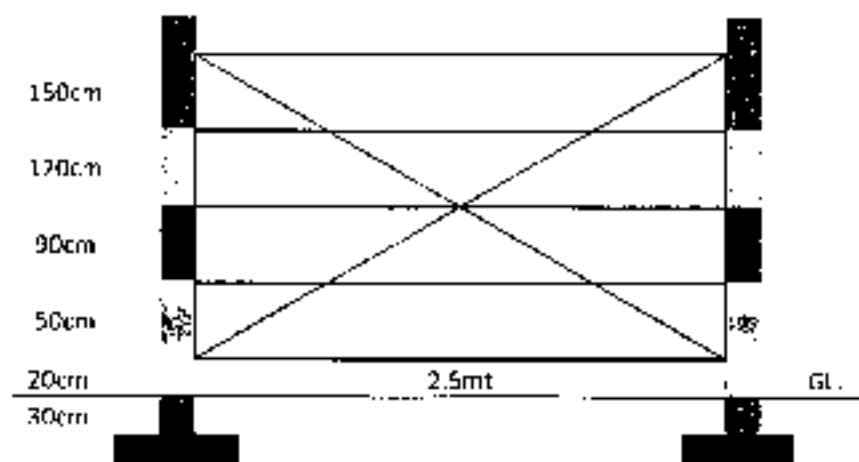
Tender seedlings planted are subject to damage by ground fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundary of the plantation and several internal lines need to be scrapped to a width of 2mtr during February-March. The cut back materials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

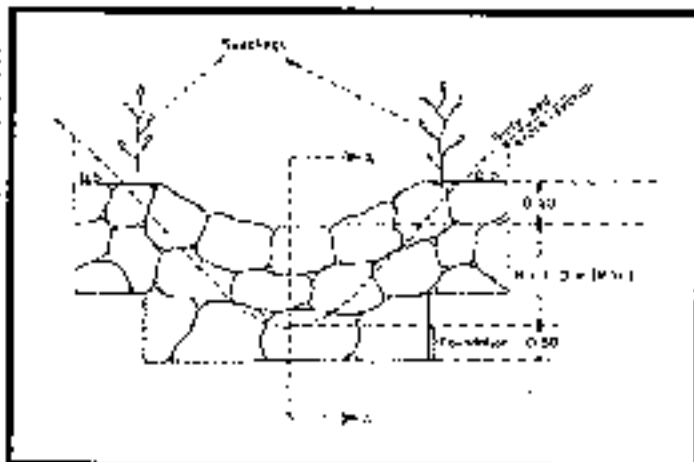
d(vi) Fencing.

Barbed wire fencing is suggested along the plantations. The standard norm for fencing is 126 Rmt per hectare. Hence it is proposed to fence (As per norm@126m/ha 1st Patch 34.76 ha = 4380 meter for 2nd patch (Additional Land) 8.552ha = 1078 meter Actual perimeter

Description of Barbed Wire Fencing.

It is suggested to put T shaped pillars at an interval of 2.5 m. The length of such pillar is 2.10 m. (1.8m above the ground & 0.30m below the ground.) Size 15cmx10cm. The Lower bar of inverted "T" is of 30cm including the width of the pillar. There will be 5 strands of twin ply barbed wire at a height of 20cm, 50cm, 90cm, 120cm, and 150cm. Two strands will be put diagonally (connecting 20cm point to 150 cm point & 150cm point to 20cm point)





f) Protection (Fencing, Watch man, People's Participation etc.):

In order to provide protection to plantation so raised, Provision for Fencing, watchman has been made and discussed and elaborated in foregoing paragraphs.

In respect of people's participation, It is proposed to constitute and strengthen the VSS in Sanabudhade and Sikabandha village. For activation / constitution & motivation of VSS Rs2.00 lacs has been provided to carryout strengthening of VSS, Vocational training and for other CPA Activities.

g) Proposed Monitoring Mechanism:

Implementation of the planting programme will be monitored by the DFO, Rayagada and RCCF, Koraput periodically. As other technical facilities / tools are now available at the hands of supervising authority and KML file along with Coordinates available it can be easily monitored from Satellite imagery / Google earth maps.

h) Any other information:

The villagers are mostly tribals and they have a liking for fruit bearing trees i.e. Tamarind, Mango, Jack Fruit and Jamun. It should be our endeavor to plant more fruit bearing trees (about 15%) to encourage their participation. Periodical interaction with VSS will go a long way in its success.

Total Project Cost under Compensatory Afforestation comes to Rs 103.215 lakh. (Rupees One Crore three Lakh Twenty One thousand & five hundred only).

Compensatory Afforestation Scheme for Patch-II. Area 8.552 ha

(Block Plantation Mode-8.522ha)

1. Details of Non-forest land allotted for Compensatory afforestation:

The land details of Non Forest area selected and allotted for compensatory afforestation is as follows.

District: Rayagada;

Tahasil : Bisamkatak.

Name of Forest Division: Rayagada , Range: Muniguda

Land Schedule:

Sl No.	Village	Khata no.	Plot No.	Kisam	Area taken in Ac	Total Plot Area in Ac	Remark
1	Sindhuvanga	25	13	Parbat	13.162	33.000	Additional CA land and allotted vide letter No 349/XX-1/2018 dated 22.02.2018 of Tahasildar Bissamkatak.
		25	87	Parbat	7.969	24.500	
	Total				21.131 Ac = 8.552 hectare.	57.5	

2. Description of Area

The land selected and allotted by the Collector, Rayagada comes within territorial jurisdiction of Muniguda Range under Divisional Forest Officer, Rayagada. The Additional patch is 1200 meter away from Ghagurhipahar Proposed Reserved Forest.

Soil: The land is having a good soil depth to bear good and healthy vegetation. Soil is Red loamy with gravels. There is no remarkable erosion.

Topography: The land is with mixed topography of Plains with hillocks. The altitude of plains is about 360 MSL where as the highest hillock is of 420 MSL. The slope is gently to moderate.

Climate: The area experiences a tropical climate. The average rainfall is 1400mm. Summer is from March to June. The South west monsoon brings usual rain and most of the rainfall receives within July to October. Depression in Bay of Bengal brings wide spread rainfall to this region.

Vegetation: The area bears scattered trees of Mango, Jamarind and Kendu, Bela, Dhaura, Sonha, Karada saplings in bushy stage. The area contains weeds and Eupatorium to a greater extent.

Biotic Interference.

There is moderate grazing pressure in nearby forest.

Villages surrounding the area. The land is surrounded by village- Paika Dakuluguda, Tadingapai.

The population in these villages is as given below.

Name	No_HH	TOT_F	TOT_M	TOT_F	P_SC	P_ST	Remark
Sindhuapaga	84	331	169	162	54	49	Adjacent to additional CA path.
Paika Dakuluguda	371	1724	818	906	331	490	
Tadingapai	57	225	106	113	20	150	
Total	512	2280	1093	1187	470	589	

The population is mainly SC & ST. General (49.17%), SC (20.61%) & ST (30.22%). There is availability of labour for any forestry operation.

3. Plantation Model:-

It is proposed to take up plantation in Block Plantation model i.e.

- Block Plantation @1600 plants per hectare Over 8.552 ha.
- Soil & Moisture Conservation. 25% of Planting Cost
- Pit size 60cmx60cmx60cm.
- Barbed wire fencing over 1672 Rmt as per the site condition.

4. Schedule of Plantation Programme:-

It is proposed to take up the plantation work in second year and subsequent maintenance as per approved cost norm. The special Soil conservation measures to an extent of "an additional cost of 25% of the planting cost" are to be utilized as per condition number Para 2(vi) of the Stage-I order. The planting details summarized below.

Sl No	Parameters / description	Description
1	Model	Block Plantation
2	No of Plants per Hectare	1600 no
3	Total area to be planted in Hectare	8.552
4	Total number of Plants to be planted.	13684
5	Spacing to be adopted	2.5mx2.5m
6	Fencing required as per actual.	1672 Rmt
7	Wage Rate	Rs213.50

The Cost norm for Block plantation is at Annexure I. The year wise flow of funds is as furnished below.

Year	Block Plantation @ 552 ha		Total Planting cost in lakh	Special SML @ 75% in lakh	Barbed wire Fencing Cost in Lakh	Total amount in Lakh Rs
	Rate per ha	Amount in lakh				
0 th	25235	7.004	7.004	0.501	6.918	16.766
1 st Yr	22292.75	1.906	1.906	0.477		2.383
2 nd Yr	12590.5	1.077	1.077	0.269		1.346
3 rd Yr	8752	0.748	0.748	0.187		0.936
4 th Yr	3843	0.329	0.329	0.082		0.411
5 th Yr	3843	0.329	0.329			0.329
6 th Yr	3843	0.329	0.329			0.329
7 th Yr	3843	0.329	0.329			0.329
8 th Yr	3843	0.329	0.329			0.329
9 th Yr	3843	0.329	0.329			0.329
10 th Yr	3843	0.329	0.329			0.329
Total	93971.25	8.036	8.036	1.516	6.918	16.471
USS / EPA Activities in two villages						1.00
S. Total						17.471
Add 20% cost escalation						3.494
Total						20.965

(Rupees Twenty Lakh Nintysix Thousand & Five hundred only)

5. Technical details:-

- General:** The plantation will be taken up in Block Plantation mode. Under Block plantation 8.552 ha will be covered. The year wise activities to be implemented has been enumerated in the approved Cost norm at Annexure-I.
- Spacing:** The plant density proposed for planting is @1600 plants per ha. The spacing is 2.5mX2.5m which is generally adopted in this tract. It is suggested to have the line of planting along the contour and plant to plant in adjacent row is staggered.

This will reduce the runoff and encourage percolation of water and enrichment of vegetation.

- c) **Choice of Species:** The suitable species for the site as indicated from the present vegetation is preferable drought hardy and pioneer species as per plant succession. Mostly indigenous species will be planted up. In the plain / moderate slope species suggested are

1. *Azadirachta indica* (neema)
2. *Artocarpus heterophylla*.
3. *Bambax ceiba* (Simli)
4. *Cassia fistula* (Sunnari)
5. *Dendrocalamus strictus*. (Baunsha)
6. *Gmelina arborea* (Gambhari)
7. *Mangifera indica* (Aamba)
8. *Peltiferum ferugineum* (Rudra chuda)
9. *Phyllanthus emblica* (Anja)
10. *Pongamia pinnata* (Karanja)
11. *Sonneratia sonnerati* (Basa Chakunda)
12. *Syzygium cumini* (Jamun)
13. *Tamarindus indica* (Tentuli)
14. *Terminalia tomentosa* (Ason)
15. *Ziziphus mauritiana* (Bara koli)
16. *Bauhinia vahlii* (Siali)
17. *Simarouba glauca* (Simarouba)
18. *Tectona grandis* (Saguan)

Towards uphill side species of drier tract are to be preferred. These are

19. *Bambax ceiba* (Simli)
20. *Cassia fistula* (Sunnari)
21. *Caesalpinia bonduca* (Gila)
22. *Cistanthus calinus*. (Karada)
23. *Terminalia tomentosa* (Ason)
24. *Ziziphus mauritiana* (Bara koli)
25. *Ficus bengalensis*. (bara)
26. *Dendrocalamus strictus*. (Baunsha)

d) **Plantation Method.**

d(i) **Alignment, stacking and Pitting.**

Alignment and stacking will be taken up in the month of January. Pits of size 30 cm x 30cm x 30cm are to be dugout with a spacing of 2.5mt x 2.5mt @1600 plants per hectare. Alignment will be made along the contour strictly. It is also suggested to have plants staggered within adjacent rows to reduce runoff.

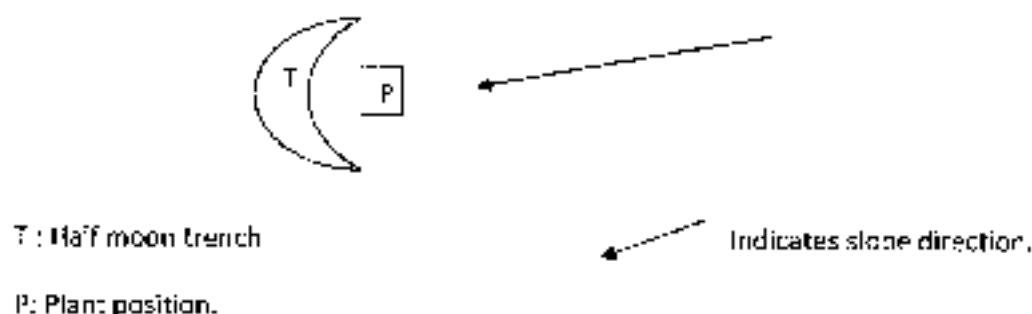
d(ii) **Planting**

Plantation will be done after first regular shower of monsoon and to be completed within a week. Basal dose of NPK/DAP fertilizer @30gm per plant to be given. Utmost care is to be taken to apply insecticides @5gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

d(iii) **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 during first year. Preferably Strip Weeding along the contour will be taken up. One weeding and soil working has to be done in second year and third year of plantation. Application of 30gms of NPK/DAP to be added to the soil per plant at the time of soil working during rains during 1st & 2nd year of plantation.

During second weeding, provision of Half Moon trench is suggested. This will also be repeated during 2nd year also. The design is furnished below.



d(iv) Application of insecticide:

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 insecticide may be done if badly necessary.

d(v) Fire line tracing and maintenance:

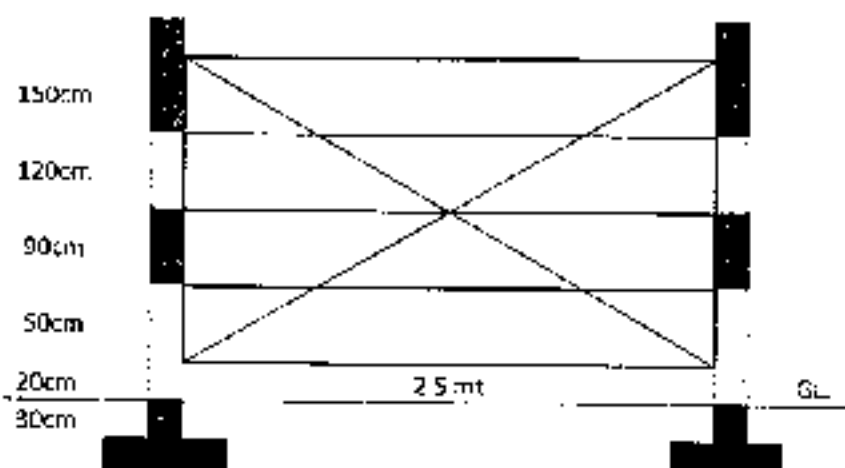
Tender seedlings planted are subject to damage by ground fire. It is required to protect the plantation and forest growth from fire hazard by tracing of fire lines. Boundary of the plantation and several internal lines need to be scrapped to a width of 2mtr during February March. The cut back materials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

d(vi) Fencing.

Barbed wire fencing is suggested along the plantations. The standard norm for fencing is 126 kmt per hectare. Hence it is proposed to fence around 8.552ha but actual perimeter taken i.e. 1672 meter.

Description of Barbed Wire Fencing.

It is suggested to put T shaped pillars at an interval of 2.5m. The length of such pillar is 2.10 m. (1.8m above the ground & 0.30m below the ground.) Size 15cmx10cm. The Lower bar of inverted "I" is of 30cm including the width of the pillar. There will be 5 strands with two ply barbed wire at a height of 20cm, 50cm, 90cm, 120cm, and 150cm. Two strands will be put diagonally (connecting 20cm point to 150 cm point & 150cm point to 20cm point)



Details of Calculation of Barbed wire fencing for 1672 Rmt.					
Sl No	Particulars of work	Unit	Quantity	Rate/ each	Amount
1	Cost of RCC fence post size 7' X 6" X 4" (1 post over 2 meter) including loading, unloading & transportation to site	No	669	555	371295.00
2	Cost of Barbed wire for 11938 Rmt (5 strand of Horizontal & 2 strand diagonal) = 1990 Kg (6 mtr = 1 Kg approx).	Kg	1990	70	139300.00
3	Fixing of RCC Post, Barbed wire with RCC fencing post, cost of G.I wire, painting numbering etc.	No	669	250.55	171307.55
4	Add cesa 1%				6849.03
	Total				691751.98 or 6,91,800

(Rupees Sixt lakh Ninty One thousand and Eight hundred only)

d(vii) Watch and ward:

Watch and ward is necessary to protect the area from grazing, fire accident and other biotic interference. Necessary provisions have been made in the approved cost norm.

c) Soil and Moisture Conservation Works:

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 longx0.50 m width X0.5 m Deep) along the contour. Line to line interval is to be kept at 4m or as required considering the degree of slope of the land.



Staggered trench.



Contour Bunding

1) Protection (Fencing, Watch man, People's Participation etc.).

In order to provide protection to plantation so raised, Provision for Fencing, watchman has been made and discussed and elaborated in foregoing paragraphs.

In respect of people's participation, it is proposed to constitute and strengthen the VSS in Sindhupanga village. For activation / constitution & motivation of VSS Rs2.00 lakh has been provided to carry out strengthening of VSS, Vocational training and for other FPA Activities.

2) Proposed Monitoring Mechanism:

Implementation of the planting program will be monitored by the DFO, Rayagada and RCCF, Koraput periodically. As other technical facilities / tools are now available at the hands of supervising authority and KML file along with Coordinates available it can be easily monitored from Satellite imagery / Google earth maps.

h) Any other information:

The villagers are mostly tribal's and they have a liking for fruit bearing trees i.e. tamarind, Mango, Jack Fruit and Linnun. It should be our endeavor to plant more fruit bearing trees (about 15%) to encourage their participation. Periodical interaction with VSS will go a long way in its success.

6. Total Compensatory Afforestation cost.

The total cost of Afforestation for patch-II comes to **Rs 20.965 lakh**

CONSOLIDATED COMPENSATORY AFFORESTATION COST.

Patch No	Area in Ha	Plantation Model	Planting Cost In Lakh Rs
I	34.76	Block Plantation - 17.38ha	103.215
		Bald Hill Plantation - 17.38ha	
II	8.552	Block Plantation - 8.552 ha	20.965
	G. Total		124.180

(Rupees One Crore Twenty Four lakh Eighteen Thousand only.)

- Incl: 1. Topo sheet showing area for additional CA land. (Plate-A-I)
2. Cadastral Map of the Additional CA Land area. (Plate-A-II)
3. Treatment Map for Additional CA land. (Plate-A-III)
4. Annexure-I & II

Divisional Forests Officer
Rayagada Forest Division.
DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Full Title of the Project: **BAINIBASA GRAPHITE MINE**
File No.: **F. No 8-60/2016-FC of MoEF & CC, New Delhi.**
Date of Proposal: **15.03.2017**

Cost Norm for Block Plantation
 Spacing 2.5 m x 2.5 m; Number of plants @1600 per Hectare.
 Wage rate: Rs213.50

Sl. No.	Item of Works	Period of execution	#Days	Labour Cost @ Rs.213.5	Material cost	Total in Rs.
1	2	3	4	5	6	7
Preparatory Operation (0th Year)						
1	Survey Demarcation and Pillar Posting, GPS Reading with mapping	Nov/Dec	2	427	0	427
2	Site Preparation	Nov/Dec	8	1,708.00	0	1,708.00
3	Alignment & Stacking of Pils	Jan/Feb	2	427	0	427
4	Cost of Barbed wire fencing over Plot (Details calculation given below)	Feb/Mar		Separately Provided.		
5	Nursery cost (5 months old seedlings; per @Rs.10.09 seedlings; Rs.7.12 in 0 th year + Rs.2.98700 in 1 st year) for 1700 seedlings; 1000+1600)	Jan-March	44	9,354.00	2939.00	12,531.00
6	Piling 30 cm cube size	Feb-March	40	8,540.00	0	8,540.00
Total of 0th Year :-			96	20,486.00	2,939.00	23,435.00
Planting Operation (1st Year)						
1	Nursery Cost (5 months old seedlings; balance @2.98/65/- per seedling for 1760 seedlings)	April-July	21.5	4,590.25	533	5,183.08
2	Carriage and planting, casualty replacement & application of Insecticides, manure etc.	July/Aug	21	4,483.50	0	4,483.50
3	Cost of Insecticide & Bio-fertilizer		0	0	3232.00	3232
4	1 st Weeding (Complete weeding)	Aug/Sept	7	1,494.50	0	1,494.50
5	Application of Bio-fertilizer	Aug/Sept	5	1,067.50	0	1,067.50
6	2 nd Weeding (Complete weeding)	Sept/Oct	5	1,067.50	0	1,067.50
7	Soil Working (50 cms radius around plants)	Sept/Oct	7	1,494.50	0	1,494.50
8	Soil conservation measures in form of staggered trenches of dimension 2 m x 0.5 m x 0.5 m @ 30nos per ha	Sept/Oct	10	2135.00	0	2135.00
9	Fire line tracing & inspection path	Feb/March	3	640.5	0	640.50
10	Watch and ward.	Aug-March	7	1,494.50	0	1,494.50

Total of 1 st Year			06.6	18,707.75	3825	22,292.75
Maintenance Operation (2 nd Year)						
1	Casualty Replacement including cost of seeding, carriage	July/Aug	4	854	1,512.00	786
2	Complete weeding	Sept/Oct	8	1,281.00	0	1,281.00
3	Cost of Bio-fertilizer & Insecticide for 100 Plants		0	0	2,752.00	2752
4	Application of Bio-fertilizer & Insecticide	Sept/Oct	4	864	0	864
5	Soil Working (50 cms radius around plants)	Oct/Nov	7	1,494.50	0	1,494.50
6	Fireline Tracing (2 mtr wide fireline over 400 mtr long)	Feb/March	3	640.5	0	640.5
7	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 2 nd Year:-			39	8,326.50	4264.00	12550.50
Maintenance Operation (3 rd Year)						
1	Complete weeding and application of Bio-fertilizer	Aug/Sept	7	1,494.50	0	1,494.50
2	Cost of Bio-fertilizer		0	0	1,920.00	2,920.00
3	Soil Working (50 cms radius around plants)	Oct/Nov	7	1,494.50	0	1,494.50
4	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
5	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 3 rd Year:-			32	6,832.00	1,920.00	8,752.00
Maintenance Operation (4 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 4 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (5 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 5 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (6 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 6 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (7 th Year)						

1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 7 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (8 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 8 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (9 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 9 th Year:-			18	3,843.00	0	3,843.00
Maintenance Operation (10 th Year)						
1	Fireline Tracing (2 mtr wide fireline over 400 mtr long) & cultural operation	Feb/March	3	640.5	0	640.5
2	Watch and ward (Whole year)	April-March	15	3,202.50	0	3,202.50
Total of 10 th Year:-			18	3,843.00	0	3,843.00
G.Total:-			369.5	78888	12948	91836

ABSTRACT					
Year	No of Man Days	Labour Cost	Material Cost	Total Cost	
1 st Year	96.00	20496.00	2939.00	23435.00	
2 nd Year	86.5	18467.75	3825.00	22292.75	
3 rd Year	39.00	8326.50	4284.00	12590.50	
4 th Year	32.00	6832.00	1920.00	8752.00	
5 th Year	18.00	3843.00	0.00	3843.00	
6 th Year	18.00	3843.00	0.00	3843.00	
7 th Year	18.00	3843.00	0.00	3843.00	
8 th Year	18.00	3843.00	0.00	3843.00	
9 th Year	18.00	3843.00	0.00	3843.00	
10 th Year	18.00	3843.00	0.00	3843.00	
Total	379.50	81023.25	12948.00	93971.25	

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Annexure-II

Cost Norm for Bald Hill Plantation Under Compensatory Afforestation Scheme.

1600 plants at a spacing of 2.5m x 2.5m

Wage rate Rs213.50 Per day

Cost Norm for Bald Hill Plantation @1600 plants per Hectare						
(Labour cost @Rs213.50 per man day)						
S. No.	Item of Work	Preferable period of Execution	Person days	Labour cost @Rs213.50 - per day	Material cost per ha in Rs)	Total cost per ha (Rs.)
1 st Year						
1	Survey and demarcation	June	2	427	0	427
	Fencing (i) For an average of 126 meters/ha Galvanized wire fencing added separately.			Added separately		
	(ii) To be strengthened by planting of bamboo and other seedlings in two rows. Bamboo to be planted at 2 meters spacing in staggered manner on the two rows, and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2m apart. Thus 500 plant (125 Bamboo and 375 others) to be planted in two rows to cover 126 m of periphery/ha by the vegetative fence (Bamboo seedlings @ Rs.9.45 per seedling x 125 = Rs.1181.00, Agave seedling @ Rs.3.50 per seedling x 375 = Rs.1312.00)	June-Sept	10	2135	2493	4641.5
1	Planting (1600 per ha) each pit 45 cm ³	Nov-Dec	122	27328	0	27328
1	Soil and water conservation measures (a) Staggered bench along the contour @ 600 per ha (2.5m x 0.5 m x 0.5m), digging of percolation pits @ 600 per ha in line of staggered benches, gully plugging and Drainage line treatment, half moon trench on the uphill side of each planting pit (100 MD for staggered trench / percolation pits and 30 MD for gully plugging, drainage line treatment and half moon trench).	Sept-Nov	130	27755	0	27755
	(b) Site clearance- 8 MD, alignment and staking of contour lines on ground, planting pits, contour trenches / percolation pits and check dam sites, etc.- 2 MD	July-Aug	10	2135		2315
1	Raising of seedlings in poly bags (minimum 60 cm high) @ Rs.5.45/- seedling (Rs.6.07 in 2 nd year) : Part (1700 saplings to be raised for one hectare from January-March @ Rs.11/48/-)	Oct-Mar	44	9394	2339	12311

	Sub Total		325	69387.5	5432	74819.50
Planting Operation (1 st Year)						
1	Cost of sapling (balance) from April/June/July @ Rs 2.75 per seedling for 1760 seedlings = Rs 4893/-	Apr-Jul	21.5	4893.25	593	5183.25
2	Freshening of plot -60 MC, filling with fertile soil and farm yard manure (FYM) 24 MC, application of insecticide and planting of 60 cm tall saplings including carriage of plants - 21 MC	June-July	109	23271.5	0	23271.5
3	Cost of Fertile Soil 0.25 CM @ Rs.8 per CM/FW 0.25cm @ Rs 15 per CM per mt		0	0	9250	9250
4	Sowing of seeds on dug out earth of trench	June	6	1281	200	1481
5	Carriage -6 MC, Planting including Casualty replacement 6 MC, fertilizer application - 5 MC, 1st weeding - 7 MC, 2nd weeding - 5 MC, soil working - 7 MC	July-Aug	26	7686	0	7686
6	Cost of Fertilizer and insecticide (Granular Insecticide @ 5 gms/plant @ Rs.80/- per kg = Rs.400.00, NPK 100 gms/plant in two doses @ Rs 24 per kg = 2400		0	0	4480	4480
7	Repair and maintenance of bamboo fence including material cost	Aug-Oct		Added separately		
8	Maintenance of soil and Moisture Conservation measures (20% of cost)		25	5551	0	5551
9	Closure to grazing; fire and other block interference by engaging watch & ward	April-Mar	30	6405	0	6405
10	Fire tracing and control, display board construction, painting / writing, other miscellaneous cost	Jan-Feb	10	2135	360	2495
	Sub Total		238.5	50919.75	14833	65752.75
Maintenance operation (2 nd Year)						
1	Casualty replacement - 6 MC including seedling cost @ Rs.9.45 per seedling and its transportation	June-July	50	2135	1512	5647
2	Soil working - 7 MC, 1st weeding - 6 MC, 2nd weeding - 6 MC and fertilizer application - 4 MC	Aug-Oct	23	4910.5	0	4910.5
3	Cost of fertilizer @ 50 gms NPK per plant @ Rs.24/- per kg for 1600 plants = Rs.1920.00 Insecticide @ 5 gm per plant for 160 nos. of plants @ Rs. 80 per KG = Rs. 6400		0	0	1984	1984

4	Repair and maintenance of bamboo fence including material cost	Aug-Oct		Barbed wire fencing Provided Separately.		
5	Maintenance of Soil and Moisture Conservation measures (20% of cost)	Aug-Oct	26	5551	0	5551
6	Fire tracing and control and other miscellaneous cost	Feb-Mar	10	2135	0	2135
7	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	30	6405	0	6405
	Sub Total		99	21136.50	3496	24632.50
Maintenance operation (3rd Year)						
1	Repair and maintenance of fence-15 MD/ (in case of barbed wire fencing Rs.9000/- for repair), SMC measures (Renovation)-26 MD and maintenance of plantation-14 MD as per requirement	April-Mar	40	8540	500	9040
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	April-Mar	18	3843	0	3843
	Sub Total		58	12383	500	12883
Maintenance operation (4th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	35	7472.50	500	7972.50
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		53	11315.50	500	11815.50
Maintenance operation (5th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
Maintenance operation (6th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489

2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
Maintenance operation (7th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
Maintenance operation (8th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
Maintenance operation (9th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
Maintenance operation (10th Year)						
1	Repair and maintenance of fence-13 MD / no maintenance in case of barbed wire fencing, SMC measures - 21 MD and maintenance of plantation-14 MD	April-Mar	14	2989	500	3489
2	Closure to grazing, fire and other biotic interference by engaging watch and ward	Apr-Mar	18	3843	0	3843
	Sub Total		32	6832	500	7332
	Grand Total		965.50	206134.25	27761	233895.25

ABSTRACT				
Year	Man days	Labour Cost	Material Cost	Total Cost in Rs
0th Year	325	69,387.50	5432	74,819.50
1st Year	238.5	50918.75	14832	65,757.75
2nd Year	99	21,135.50	3490	24632.50
3rd Year	58	12333	500	12,833
4th Year	53	11,315.50	500	11,815.50
5th Year	32	6832	500	7332
6th Year	32	6832	500	7332
7th Year	32	6832	500	7332
8th Year	32	6832	500	7332
9th Year	32	6832	500	7332
10th Year	32	6832	500	7332
Total	965.50	2,06,194.25	27762	2,33,855.25


 DIVISIONAL FOREST OFFICER
 RAYAGADA DIVISION



OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS, ODISHA
ARANYA BHAWAN, BHUBANESWAR-23.

No. 12557 /9F (MG)-367/2017
Dated, BBSR, the 08th June, 2018

To

The Regional Chief Conservator of Forests, Koraput Circle,
The DFO, Rayagada Forest Division.

Sub: Diversion of 44.038 ha of forest land including 9.286 ha of forest land in Safety Zone within total ML area of 58.704 ha in Bainibasa Graphite Mining lease of M/s Pradhan Industries located in Bainibasa village under Muniguda Tahasil of Rayagada district, Odisha for graphite mining.

Ref: Memo No.2498/F&E dated 01.02.2018 of Spl. Secretary to Government, F&E Department.

I am directed to make a reference to the above cited correspondence of Special Secretary to Government, F&E Deptt. in which it is requested to provide the necessary action to be taken at its earliest. The financial outlay of revised CA Scheme over 43.012 ha of non-forest land in village Sanaburahana, Sikubandha and Sindhapanga of Bisenkatik Tahasil under Rayagada Forest Division pertaining to the above project amounting to Rs. 1,17,61,000/- (Rupees one crore seventeen lakhs sixty-one thousand) only, technically approved by PCCF, Odisha, Bhubaneswar is enclosed herewith for reference. Further, you are requested to prepare a scheme for SMC structures limiting the estimated cost to 25% of the revised CA cost in compliance to condition No.2 (vi) and to send the scheme to this office through RCCF, Koraput Circle for necessary approval.

This is most urgent.

Encl: As above

8/6/2018
Deputy Conservator of Forests (FC)

Memo No. 12558 Dt 08-6-18

Copy forwarded to the Principal Chief Conservator of Forests, (WL) & CWLW, Odisha for information & necessary action with reference to F&E Deptt. Memo No.2496/F&E dt.01.02.2018 to his address.

8/6/2018
Deputy Conservator of Forests (FC)

Contd...P/2

Memo No. 12550 Dt. 08-6-18

Copy forwarded to the Steel & Mines Department/ Collector, Rayagada for information & necessary action with reference to F&R Deptt. Memo No. 2499/F&R dt. 01.02.2018 to their address.

[Signature]
G. L. Prasad

Deputy Conservator of Forests (FC)

Memo No. 12560 Dt. 08-6-18

Copy forwarded to the M/s Pradhan Industries, Talanga Bazar, Cuttack, Pin-753009 for information and necessary action with reference to F&R Deptt. Memo No. 2500/F&R dt. 01.02.2018 to his address.

[Signature]
G. L. Prasad

Deputy Conservator of Forests (FC)

Memo No. 12561 Dt. 08-6-18

Copy forwarded to Special Secretary to Government, F&R Department for information and necessary action with reference to that Deptt. Letter No. 10r (Cor) 289/2016-2495/F&R dated 01.02.2018.

[Signature]
G. L. Prasad

Deputy Conservator of Forests (FC)

e/c

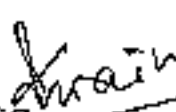
Financial Outlay for Revised Compensatory Afforestation Scheme over 43.312 ha of non-forest land in village Sanaburahana, Sikabandha and Sindhpanga of Bisankatak Tahsil under Rayagada Forest Division in lieu of diversion of 44.038 ha. of forest land including 9.286 ha in Safety Zone against Bainibasa Graphite Mines of M/s Pradhan Industries, Cuttack.

(Wage Rate @ Rs.224.30 per MD)

Sl. No.	Description	Amount (Rs.)
1	Cost of Block Plantation @ 1600 Plants/Ha over 17.38 ha @ Rs.98,069.85 per ha with 10 years maintenance.	17,04,454.00
2	Cost of Bald Hill Plantation @ 1600 Plants/Ha over 17.38 ha. @ Rs.2,63,624/- per ha. excluding fencing cost with 10 years maintenance.	45,81,785.00
3	Cost of Block Plantation @ 1600 Plants/Ha. over 8.552 ha @ Rs.98,069.85 per ha. with 10 years maintenance.	8,38,693.00
4	Cost of Barbed wire fencing over 5.467 Kms. (As proposed by DFO, Rayagada)	23,75,899.00
5	EPA/Incentive to V.S.S. (As proposed by DFO, Rayagada)	3,00,000.00
	Total	98,00,831.00
6	Add Escalation Cost (20%).	19,60,166.00
	Grand Total	1,17,60,997.00
		Or rounded off to 1,17,61,000.00

(Rupees one crore seventeen lakhs sixty-one thousand only)

Technically Approved


Principal Chief Conservator of Forests

Odisha
Principal C.C.F.
Odisha, Bhubaneswar

12/12/2018

AGENCY COPY	
NEFT/RTGS CHALLAN for Ad-HOC CAMPA	
Date : 27-12-2018 ✓	
Agency Name:	PRADHAN INDUSTRIES
Application No.	5824824845
MoEF/SD File No.	8-58/2017-FC
Location:	ORRISA
Address:	Teleng Bazar Near Purighat Police Station CuttaCutack
Amount(in Rs)	11761000/-
Amount in Words :One Crore Seventeen Lakh Sixty-One Thousand Rupees Only	
NEFT/RTGS to be made as per following details;	
Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP0000371
Pay to Account No.	150826824824845 Valid only for this challan amount.
Bank Name & Address:	Corporation Bank Lodhi Complex Branch, Block 11, CGO Complex, Phase I, Lodhi Road, New Delhi - 110003
- This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only - This challan is valid only for seven days.	

After making successful payment, User Agencies may
Email: helpdeskcampa@corpbank.co.in

CTR-BYIDH18363740467



DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

BANK OF INDIA.....Branch	
Please Issue/ send (Tick)	DD PO MT TT
ON _____	
Please effect Star Insta (RTGS) / EFT on _____	
Center	_____
Bank	CORPORATION
Branch	LODHI COMPLEX
In Favour of Mr./Mrs./Dr./Messrs _____	
ORRISA CAMPA	
Pay order (MT/TT/RTGS/EFT) _____	
Postage	Rs. _____ P
Telegram	Rs. _____ P
Total Amount Rs. 11761000/- P	
Details of Cheques or Cash Deposited	
Branch	Cheque No.
_____	_____
Received By _____	

Annexure- 3 (d) (341)



OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS, ODISHA
ARANYA BHAWAN, BHUBANESWAR-23.

Memo No. 13477 /9F (MG) - 367/2017
Dated, BBSR, the 30th July, 2019



To
✓ The Divisional Forest Officer,
Rayagada Forest Division,
Rayagada.

Sub:- Diversion of 44.038 ha of forest land including 9.286 ha of forest land in Safety Zone within total ML area of 58.704 ha in Bainibasa Graphite Mining lease of M/s Pradhan Industries located in Bainibasa village under Muniguda Tahasil of Rayagada district, Odisha for graphite mining Scheme for implementing conservation measures in Compensatory Afforestation.

Ref:- Memo No. 1950 dated 19.07.2019 of RCCF, Koraput.

In inviting a reference to the above cited memo on the captioned subject, the financial outlay for revised Compensatory Afforestation Scheme over 43.312 ha of non-forest land identified in village Sanabudahada, Sikabandha and Sindhupanga under Bisam Cuttack Tahasil of Rayagada Forest Division pertaining to the above project has been technically approved for Rs.2,19,77,000/- (Rupees Two Crore nineteen lakhs seventy seven thousand) only by Addl. PCCF (FD & NO, F.C. Act) at current wage rate @ Rs.286.30/- per MD. The approved financial outlay alongwith CA scheme is enclosed herewith for information and necessary action.

In view of the above, you are requested to raise the demand on the user agency for payment through web portal of MoEF & CC and submit the deposit particular of the amount paid along with the Stage-I compliance pertaining the above project to this office for taking necessary action.

This is urgent.

Encl: As above

Additional Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Memo No. /Dt.

Copy forwarded to the Regional Chief Conservator of Forests, Koraput Circle for information & necessary action with reference to his Memo No.1949 dt.19.07.2019.

Additional Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Memo No. /Dt.

Copy forwarded to M/s Pradhan Industries, Telenga Bazar, Cuttack, Pin- 753009 for information and necessary action.

Additional Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, F.C. Act

Financial Outlay for Revised Compensatory Afforestation Scheme over 43.312 ha of non-forest land identified in village Sanabudahada, Sakabandha and Sindhupanga under Bisam Cuttack Tahasil of Rayagada Forest Division in lieu of diversion of 44.038 ha of forest land including 9.286 ha in Safety Zone against Bainibasa Graphite Mines of M/s Pradhan Industries Ltd. Cuttack.

(Wage Rate @ Rs.286.30 per MD)

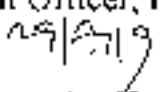
Sl. No.	Description	Amount (Rs.)
1.	Cost of AR Plantation @ 1600 plants per ha over 17.38 ha @ Rs.1,29,437.50 per ha with 10 years maintenance without provision of fencing	22,49,624.00
2.	Cost of AR Plantation @ 1600 plants per ha over 8.552 ha @ Rs.1,29,437.50 per ha with 10 year maintenance without provision of fencing	11,06,950.00
3.	Cost of Bald Hill Plantation @ 1600 plants per ha over 17.38 ha @ Rs.3,47,702.18 per ha with 10 year maintenance without provision of fencing	60,43,064.00
4.	Cost of Barbed wire fencing over 5.467 Km (3.795 Km around Block Plantation over 17.38 ha & Bald Hill Plantation over 17.38 ha + 1.672 Km around Block Plantation over 8.552 ha) with 3 years maintenance (@ 2% of cost per RKM Rs.6,73,270/- RKM)	36,80,767.00
	CA Cost Total (A)	1,30,80,405.00
5.	Cost of Site Specific SMC 25% of the CA cost as per Condition No.2 (vi) of Stage-I approval order vide letter No 8-58/2017-FC dated 22.01.2018 of GeI, MoEF & CC, New Delhi (As proposed by DFO)	
	PATCH-I	
	(i) Cost of Graded Earthen Guide Band of 900 Rmt length @ Rs.1671.81 per Rmt	15,04,650.00
	(ii) Gully plugging structure by Loose Boulder Check Dam	
	(a) 5.45 mt length for 11 nos. @ Rs.26,000/- each	2,86,000.00
	(b) 4.54 mt length for 14 nos. @ Rs.21,000/- each	2,94,000.00
	(c) 3.63 mt length for 17 nos. @ Rs.17,000/- each	2,89,000.00
	(iii) Cost of contour bund of 10 mt length for 62 nos. @ Rs.2585/- each	1,60,270.00
	Total (Patch-I)	25,33,900.00

No	Description	Amount (Rs.)
	PATCH-II	
	(i) Cost of Graded Earthen Guide Bund of 255 mt length @ Rs.1671.76 per Rmt	4,26,300.00
	(ii) Gully plugging structure by Loose Boulder Check Dam	
	(a) 5.45 mt length for 4 nos @ Rs.26,000/- each	1,04,000.00
	(b) 4.54 mt length for 14 nos. @ Rs.21,000/- each	63,000.00
	(c) 3.63 mt length for 17 nos. @ Rs.17,000/- each	85,000.00
	(iii) Cost of contour bund of 10 mt length for 23 nos. @ Rs.2585/- each	59,455.00
	Total (Patch-II)	7,37,755.00
	25% of CA cost towards SMC (Patch-I + Patch-II) Total (B)	32,71,655.00
	CA Cost + 25% of CA Cost towards SMC Total (A+B)	1,63,52,060.00
6.	15% of total Plantation Cost towards EPA/ Incentive to VSS	19,62,061.00
	Total	1,83,14,121.00
7.	Add Escalation Cost (20%)	36,62,824.00
	Grand Total	2,19,76,945.00
		Or rounded off to
		2,19,77,000.00

(Rupees Two crore nineteen lakhs seventy seven thousand) only

Technically Approved


Additional Principal Chief Conservator of Forests
Forest Diversion & Nodal Officer, FC Act


Addl. Principal Chief Conservator of Forests
(Forest Diversion & Nodal Officer FC Act)
Off. the P.C.C.F. Office, Bhatnagar



PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671 - 2412299

Registered Office: Pradhan Industries, P.O. - Bhandhamandi, Dist. - Raygada, Odisha - 751001
E-mail: pradhanindustriesco@yahoo.com

Ref. No. P/PMC/BAS-DRP/ 5 / 2019

Date 23.08.2019...

To
The Divisional Forest Officer
Rayagada Division

Sub: Diversion of 44.038ha of forest land coming within MI area of Bainbasa Graphite Mines of M/s Pradhan Industries at village Bainbasa under Muniguda Tahasil of district Rayagada.

→ Deposit of Additional revised demand & submission of Stage-I Compliances thereof

Ref: Our letter No. P/PMC/BAS-DRP/227/2019, dated 10.01.2019 & Memo No. 13477, dated 30.07.2019 of Addl. PCCF (Nodal), to your address.

In inviting a reference to the above subject it is to submit that the Stage-I Compliances for Diversion of 44.038ha of Revenue Forest land coming within MI area of Bainbasa Graphite Mine of M/s Pradhan Industries at village Bainbasa under Muniguda Tahasil of district Rayagada was submitted to your good office vide our letter no P/PMC/BAS-DRP/227/2019, dated 10.01.2019. While processing the compliances at your good office and at Office of the PCCF, Odisha Bhuganeswar, it is felt that the User Agency is required to deposit an additional cost arising out of revision of Wage rates during October, 2018 and May 2019. Accordingly, your office has raised additional demand as detailed below

Sl No	Details of Schemes	Additional Demand in Rs	Reference letter on Demand raised
1	Compensatory afforestation & SMC	1,02,16,000	3190.dtd. 01.08.19
2	Plantation on Degraded Forest land 1 & ½ times of Safety Zone Condition no (xx) Part-2	16,863	3175. dtd.29.07.19
3	Gap planting and Soil and Moisture conservation activities to restock and rejuvenate the degraded open forests (Having crown density less than 0.4), Condition no. (xxii)	3,00,031	3178.dtd.29.07.19
TOTAL AMOUNT		1,05,32,894	

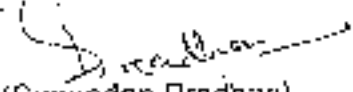


In response to the said demand note referred as above, we have deposited a sum of Rs. 1,05,32,894.00 (Rupees One Crore Five lakh Thirty two thousand eight hundred & ninety four only) vide UTR No BKIDH19234820858 dated 22.08.2019. The copy of the UTR is enclosed for your reference.

On the above circumstances, we would like to request your good office to kindly transmit the Stage-I compliances submitted to your office vide our letter under reference at the earliest so as to enable us to obtain Stage - II Clearance.

An early action is requested.

Yours faithfully,
For M/s. PRADHAN INDUSTRIES


(Sunandan Pradhan)
PARTNER

Copy to

- (1) The Regional Chief Conservator of Forest, Korapur for kind information.
- (2) The Additional PCCF (Forest Diversion & Nodal Officer, FC Act) Office of the PCCF, Odisha, Bhubaneswar for kind information.

2019

NEFT / RTGS CHALLAN

AGENCY COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 22-08-2019	
Agency Name	PRADHAN INDUSTRIES
Application No.	6324024754
MoEF/SG File No.	5-58/2017-FC
Location	ORRISA
Address	Seelanga Bazar Near Purighat Police Station Cuttack
Amount (In Rs.)	10532384/-
Amount in Words: One Crore Five Lakhs Twenty Two Thousand Eight Hundred and Thirty Eight Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP0000371
Pay to Account No.	40025024824754 valid only for this challan amount
Bank Name & Address:	Corporation Bank Laxmi Vihar Branch Plot No. 10, 11, 12, 13, 14, 15 Sector-10, Connaught Place New Delhi-110028
- This challan is valid only for the purpose of making payment to ORRISA CAMPA only. - This challan is valid only for the stated date.	

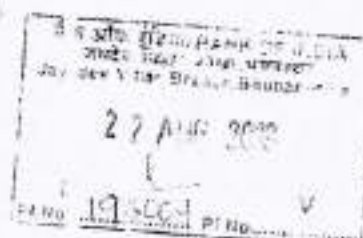
BANK COPY	
NEFT / RTGS CHALLAN for Ad-HOC CAMPA	
Date : 22-08-2019	
Agency Name	PRADHAN INDUSTRIES
Application No.	6324024754
MoEF/SG File No.	5-58/2017-FC
Location	ORRISA
Address	Seelanga Bazar Near Purighat Police Station Cuttack
Amount (In Rs.)	10532384/-
Amount in Words: One Crore Five Lakhs Twenty Two Thousand Eight Hundred and Thirty Eight Rupees Only	
NEFT/RTGS to be made as per following details:	
Beneficiary Name:	ORRISA CAMPA
IFSC Code:	CORP0000371
Pay to Account No.	40025024824754 valid only for this challan amount
Bank Name & Address:	Corporation Bank Laxmi Vihar Branch Plot No. 10, 11, 12, 13, 14, 15 Sector-10, Connaught Place New Delhi-110028
- This Challan is valid only for the purpose of making payment to ORRISA CAMPA only. - This challan is valid only for the stated date.	

When the beneficiary pay the amount, the bank may send the copy of challan to the beneficiary.

For M/s. PRADHAN INDUSTRIES
PARTNER

For Bank of India
Branch Manager

31/08/19 234820865



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104.100.140.650:8080/Report/ReportPage.aspx

Schedule : Form No.39 A



କର୍ମୀ : ବିପ୍ଳବୀ
ଆମ : ଶ୍ରୀରାମଚନ୍ଦ୍ର
ଆମ ନମ୍ବର : 345

କର୍ମୀ : ବିପ୍ଳବୀ
କର୍ମୀ ନମ୍ବର : 517
ନିଆ : ନାମାନ୍ତରା

କର୍ମୀଙ୍କ ନାମ ଓ କର୍ମାଳୟ ନାମ ଓ ଠିକଣା	ଓଡ଼ିଶା ସହକାରୀ ସଂଘ ନଂ 1
୧) ଓଡ଼ିଶା ସହକାରୀ ନଂ	29
୨) ପ୍ରଧାନ କାର୍ଯ୍ୟାଳୟ, ପିନ୍ କୋଡ୍, ଠିକଣା ଓ ଠିକଣା	ଓଡ଼ିଶା ନଗର ବିଭାଗ

ପାଞ୍ଜିରୀ	ସଂଗ୍ରହ				
କ୍ର.ସଂ.	ନମ୍ବର	ମାତ୍ରା	ମାତ୍ରା	ନିର୍ଦ୍ଦିଷ୍ଟ କର୍ମ ଓ ଅନ୍ୟାନ୍ୟ କର୍ମ ଓ କର୍ମ ଓ	୩) କ୍ରମାବଳୀର ଓଡ଼ିଶା ସହକାରୀ
	0.00	0.00	0.00	0.00	0.00

୧) ନିର୍ଦ୍ଦିଷ୍ଟ କ୍ରମାବଳୀ : A.ପ୍ରାଥମିକ ଲେଖା ନମ୍ବର 01/2018 ଏବଂ ଓଡ଼ିଶା ସହକାରୀ ନଂ 595/2018 କ୍ରମାବଳୀର ଓଡ଼ିଶା ସହକାରୀ ନଂ 15921 ଓଡ଼ିଶା ସହକାରୀ ନଂ 13.162 ଓ 7.969 କ୍ରମାବଳୀର ଓଡ଼ିଶା ସହକାରୀ ନଂ 25 କ୍ରମାବଳୀ

BLANK SPACE FOR STAMPING

ପ୍ରଥମ ପ୍ରକାଶନ ତାରିଖ : 16/11/2018
ପ୍ରକାଶନ ତାରିଖ : 16/11/2018

DISSEMINTACK RECORDED
ନିର୍ଦ୍ଦିଷ୍ଟ କ୍ରମାବଳୀର ଓଡ଼ିଶା ସହକାରୀ ନଂ 25 କ୍ରମାବଳୀ

ନିର୍ଦ୍ଦିଷ୍ଟ କ୍ରମାବଳୀର ଓଡ଼ିଶା ସହକାରୀ ନଂ 25 କ୍ରମାବଳୀ

01/12/2018

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Copyright Clearance Center, Inc.

କିଛି ସାମାଜିକ

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2018年7月27日 星期五 14:27 第155页 共155页

BLANK SPACE FOR STAMPING

CFR 21.91.561-1511-2018

264

Reference:

ॐ नमो भगवते वासुदेवाय ॥

| ପ୍ରାଥମିକ ସୂଚୀ, 25 | | ଆଦି : ପାଳିବା ସମୟ | | | ମୋଟ : ପାଳିବା ସମୟ | |
|------------------------|-----------------------|-------------------------|--------|---------|------------------|-----|
| ପ୍ରାଥମିକ ସୂଚୀ
ନମ୍ବର | ନିର୍ବାହୀ ଅଫିସରଙ୍କ ନାମ | ନିର୍ବାହୀ ଅଫିସରଙ୍କ ସ୍ଥାନ | ଆଦି | | | ମୋଟ |
| | | | ସମୟ | ଠିକଣା | ମୋଟ | |
| 156/145 | ପାଳିବା | | 20:68 | 8:1617 | | 89 |
| 177/146 | ପାଳିବା | | 14:430 | 5:8293 | | |
| 108/147 | ପାଳିବା | | 25:325 | 10:6534 | | |
| 153 | | | 60:947 | 24:6644 | | |

Schedule I Form No.39-A

ମୌଜା : ଶିବପୁର

ଆକା : ବିଜୟନଗର

ଆକା-କଚ୍ଚର : 335



ପ୍ରମାଣିତ : ବିଜୟ କଟକ

ପ୍ରମାଣିତ ତାରିଖ : 15/11

ଠିକା : ଶିବପୁର

୧) ପ୍ରମାଣିତ ନାମ : ବିଜୟ କଟକ
 ପ୍ରମାଣିତ ତାରିଖ : 15/11

୨) ପ୍ରମାଣିତ କ୍ରମିକ ନଂ : 29

୩) ପ୍ରମାଣିତ ନାମ : ବିଜୟ କଟକ
 ପ୍ରମାଣିତ ତାରିଖ : 15/11

| କ୍ରମିକ | ପ୍ରମାଣିତ | | | | | ୪) ପ୍ରମାଣିତ ନାମ : ବିଜୟ କଟକ |
|-------------|----------|--------|--------|--------|--------|----------------------------|
| | କ୍ରମିକ | କ୍ରମିକ | କ୍ରମିକ | କ୍ରମିକ | କ୍ରମିକ | |
| ୧) ପ୍ରମାଣିତ | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |

୫) ପ୍ରମାଣିତ ନାମ : ବିଜୟ କଟକ
 ପ୍ରମାଣିତ ତାରିଖ : 15/11

BLANK SPACE FOR STAMPING

ପ୍ରମାଣିତ ପ୍ରମାଣିତ ତାରିଖ : 16/11/2018

ପ୍ରମାଣିତ ପ୍ରମାଣିତ ତାରିଖ : 16/11/2018

DISSEMINATION

DISSEMINATION

DISSEMINATION

**GOVERNMENT OF ODISHA
FOREST & ENVIRONMENT DEPARTMENT**

NOTIFICATION

No.10F (Cons) 29/19 7877 /F&E, Date 18/04/19

In exercise of the powers conferred under Section-33 of the Orissa Forest Act, 1972 (Orissa Act 14 of 1972), the State Government do hereby declare that the following land situated in Village-Sanaburahara under Bissamcuttack Tahasil in the District of Rayagada mutated and transferred in favour of F&E Department for raising Compensatory Afforestation thereon against proposed diversion of 44.038ha of forest land including 9.286ha forest land in Safety Zone in village Bainibasa under Muniguda Tahasil of Rayagada district for Bainibasa Graphite Mining of M/s Pradhan Industries vide Stage-I Order No.8-58/2017-FC dtd.22.01.2018 of Government of India, MoEF&CC, under Section-2 of the Forest (Conservation) Act, 1980, the limits of which are specified below and the area of which is 24.6644ha. (60.947Ac.) shall be Protected Forests with effect from the date of issue of the Notification and shall be known as Sanaburahara Protected Forest.

Forest Block

| | | |
|-------------------------------|---|-------------------------------|
| Name of the Protected Forests | : | Sanaburahara Protected Forest |
| Area in Ha. | : | 24.6644 |
| Area in Acre | : | 60.947 |
| Name of the Village | : | Sanaburahara |
| Name of the P.S | : | Bissamcuttack |
| Name of the Tahasil | : | Bissamcuttack |
| Name of the Sub-Division | : | Rayagada |
| Name of the District | : | Rayagada |

Land Schedule:

| Sl. No | Village | Khata No. | Plot No. | Kissam | Total Area (in Ac) | Boundary Description (Plot Nos. existing) | | | |
|--------|--------------|-----------|----------|--------|----------------------------|---|------------------|---------|--------------------|
| | | | | | | North | South | East | West |
| 1 | Sanaburahara | 26 | 106/145 | Pahada | 20.168 | 313 of Sikabandha village | 107/146 | 106 (P) | 105 |
| | | | 107/146 | Pahada | 14.454 | 105/145, 105 | 108/147 | 107 (P) | 101, 102 |
| | | | 108/147 | Pahada | 26.325 | 107/146 | Balakupa village | 108 (P) | 109, 110, 111, 121 |
| | | | | Total | 60.947 Ac
Or 24.6644 ha | | | | |

By Order of the Governor

(SURESH CHANDRA MAHAPATRA)
Additional Chief Secretary to Government

By e-mail: deputydirectorpp@rediffmail.com

Memo No. 7878/F&E Date 18.04.19

Copy forwarded to the Director of Printing, Stationery and Publication, Odisha, Cuttack for publication in an extra ordinary issue of the Odisha Gazette and supply 10 copies each to F&E Department/ Director of Land Records and Surveys, Odisha, Cuttack/ Collector, Rayagada/ DFO, Rayagada/ Tahasildar, Bissamcuttack, District-Rayagada.

The Notification is statutory and may be assigned S.R.O number.

Special Secretary to Government

Memo No. 7879/F&E Date 18.04.19

Copy forwarded to the Director, Govt. of India, Ministry of Environment and Forest and Climate Change (F.C. Division) Indira Paryavaran Bhawan, Jor Bagh, Aliganj Road, New Delhi-110003/ Additional Principal Chief Conservator of Forests (Central) Govt. of India, MoEF&CC, Eastern Regional Office, A/3, Chardasckharpur, Bhubaneswar-23 for information and necessary action.

Special Secretary to Government

Memo No. 7880/F&E Date 18.04.19

Copy forwarded to the Revenue and Disaster Management Department/ Director of Land Records and Surveys, Odisha, Cuttack/ R.D.C (SD), Berhampur/ Collector, Rayagada/ Tahasildar, Bissamcuttack, Dist-Rayagada for information and necessary action.

Special Secretary to Government

Memo No. 7881/F&E Date 18.04.19

Copy forwarded to the PCCF, Odisha / Addl. PCCF, Forest Diversion & Nodal Officer, FC Act, O/o the PCCF, Odisha / RCCF, Koraput Circle/ DFO, Rayagada Forest Division for information and necessary action.

Special Secretary to Government

Memo No. 7882/F&E Date 18.04.19

Copy forwarded to the OIC, State Portal, NJC, IT Department, Odisha Secretariat, Bhubaneswar/ M/s Luminous Infoways Pvt. Ltd., Sadhana, N-6/373, Nayapalli, Jayadev Vihar, Bhubaneswar-15 for information and necessary action/ 5 spare copies for Guard file.

Special Secretary to Government

Memo No. 7883/F&E Date 18.04.19

Copy forwarded to the Under Secretary to Government, Office Establishment Section, P&E Department for information and necessary action with reference to their letter No.21646/ F&E dt.22.11.2016.

Special Secretary to Government

**GOVERNMENT OF ODISHA
FOREST & ENVIRONMENT DEPARTMENT**

NOTIFICATION

No.10F (Cons) 29/19 7884 /F&E, Date 18.04.19

In exercise of the powers conferred under Section-33 of the Orissa Forest Act, 1972 (Orissa Act 14 of 1972), the State Government do hereby declare that the following land situated in Village- **Sikabandha** under Bissamcuttack Tahasil in the District of Rayagada mutated and transferred in favour of F&E Department for raising Compensatory Afforestation thereon against proposed diversion of 44.038ha of forest land including 9.286ha forest land in Safety Zone in village Bainibasa under Muniguda Tahasil of Rayagada district for Bainibasa Graphite Mining of M/s Pradhan Industries vide Stage-I Order No.8-58/2017-FC dtd.22.01.2018 of Government of India, MoEF&CC, under Section-2 of the Forest (Conservation) Act, 1980, the limits of which are specified below and the area of which is 10.0957ha. (24.947Ac.) shall be Protected Forests with effect from the date of issue of the Notification and shall be known as **Sikabandha Protected Forest**.

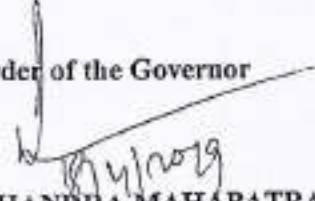
Forest Block

| | | |
|-------------------------------|---|-----------------------------|
| Name of the Protected Forests | : | Sikabandha Protected Forest |
| Area in Ha. | : | 10.0957 |
| Area in Acre | : | 24.947 |
| Name of the Village | : | Sikabandha |
| Name of the P.S | : | Bissamcuttack |
| Name of the Tahasil | : | Bissamcuttack |
| Name of the Sub-Division | : | Rayagada |
| Name of the District | : | Rayagada |

Land Schedule:

| Sl. No | Village | Khata No. | Plot No. | Kissam | Total Area (in Ac) | Boundary Description (Plot Nos. existing) | | | |
|--------|------------|-----------|----------|--------------|------------------------------------|---|-----------------------------|------|--------------|
| | | | | | | North | South | East | West |
| 1 | Sikabandha | 29 | 313/479 | Pahada | 24.947 | 336, 337 | 106 of Sanabudahada village | 351 | 312/1, 312/2 |
| | | | | Total | 24.947 Ac
Or 10.0957 ha | | | | |

By Order of the Governor


(SURESH CHANDRA MAHAPATRA)
 Additional Chief Secretary to Government

By e-mail: deputydirector@rediffmail.com

Memo No. 7885 /F&E Date 18.04.19

Copy forwarded to the Director of Printing, Stationery and Publication, Odisha, Cuttack for publication in an extra ordinary issue of the Odisha Gazette and supply 10 copies each to F&E Department/ Director of Land Records and Surveys, Odisha, Cuttack/ Collector, Rayagada/ DFO, Rayagada/ Tahasildar, Bissamcuttack, District-Rayagada.

The Notification is statutory and may be assigned S.R.O number.

Memo No. 7886 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Director, Govt. of India, Ministry of Environment and Forest and Climate Change (F&C, Division) Indira Paryavaran Bhawan, Jor Bagh, Aliganj Road, New Delhi-110053/ Additional Principal Chief Conservator of Forests (Central) Govt. of India, MoEF&CC, Eastern Regional Office, A/3, Chandrasekharpur, Bhubaneswar-23 for information and necessary action.

Memo No. 7887 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Revenue and Disaster Management Department/ Director of Land Records and Surveys, Odisha, Cuttack/ R.D.C (SD), Berhampur/ Collector, Rayagada/ Tahasildar, Bissamcuttack, Dist-Rayagada for information and necessary action.

Memo No. 7888 /F&E Date 18.04.19

Copy forwarded to the PCCF, Odisha / Addl. PCCF, Forest Diversion & Nodal Officer, FC Act, O/o the PCCF, Odisha / ROCE, Koraput Circle/ DFO, Rayagada Forest Division for information and necessary action.

Memo No. 7889 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the OIC, State Portal, NIC, IT Department, Odisha Secretariat, Bhubaneswar/ M/s Luminous Infoways Pvt. Ltd., Sedhana, N-6/373, Nayapalli, Jayadev Vihar, Bhubaneswar-15 for information and necessary action/ 5 spare copies for Guard file.

Memo No. 7890 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Under Secretary to Government, Office Establishment Section, F&E Department for information and necessary action with reference to their letter No.27646/ F&E dt.22.11.2016.

Special Secretary to Government

**GOVERNMENT OF ODISHA
FOREST & ENVIRONMENT DEPARTMENT**

NOTIFICATION

No.10F (Cons) 29/19 7899 /F&E, Date 18.04.19

In exercise of the powers conferred under Section-33 of the Orissa Forest Act, 1972 (Orissa Act 14 of 1972), the State Government do hereby declare that the following land situated in Village- **Sindhupanga** under Bissamcuttack Tahasil in the District of Rayagada mutated and transferred in favour of F&E Department for raising Compensatory Afforestation thereon against proposed diversion of 44.038ha of forest land including 9.286ha forest land in Safety Zone in village Bainibasa under Muniguda Tahasil of Rayagada district for Bainibasa Graphite Mining of M/s Pradhan Industries vide Stage-I Order No.8-58/2017-FC dtd.22.01.2018 of Government of India, MoEF&CC, under Section-2 of the Forest (Conservation) Act, 1980, the limits of which are specified below and the area of which is 8.5514ha. (21.131Ac.) shall be Protected Forests with effect from the date of issue of the Notification and shall be known as **Sindhupanga Protected Forest**.

Forest Block

| | | |
|-------------------------------|---|------------------------------|
| Name of the Protected Forests | : | Sindhupanga Protected Forest |
| Area in Ha. | : | 8.5514 |
| Area in Acre | : | 21.131 |
| Name of the Village | : | Sindhupanga |
| Name of the P.S | : | Bissamcuttack |
| Name of the Tahasil | : | Bissamcuttack |
| Name of the Sub-Division | : | Rayagada |
| Name of the District | : | Rayagada |

Land Schedule:

| Sl. No | Village | Khata No. | Plot No. | Kissam | Total Area (in Ac) | Boundary Description (Plot Nos. existing) | | | |
|--------|-------------|-----------|----------|--------------|-----------------------------------|---|---------|-----------------------------|--------|
| | | | | | | North | South | East | West |
| 1 | Sindhupanga | 29 | 15/421 | Pahada | 13.162 | 13 | 87/422 | 17, 16, | 15 (P) |
| | | | 87/422 | Pahada | 7.969 | 15/421 | 110, 88 | 50, 70, 71
71, 86,
88 | 87 (P) |
| | | | | Total | 21.131 Ac
Or 8.5514 ha | | | | |

By Order of the Governor

(SURESH CHANDRA MAHAPATRA)
Additional Chief Secretary to Government

By e-mail: deputydirectorpp@rediffmail.com

Memo No. 7900 /F&E Date 18.04.19

Copy forwarded to the Director of Printing, Stationary and Publication, Odisha, Cuttack for publication in an extra ordinary issue of the Odisha Gazette and supply 10 copies each to F&E Department/ Director of Land Records and Surveys, Odisha, Cuttack/ Collector, Rayagada/ DFO, Rayagada/ Tahasildar, Bissamcuttack, District-Rayagada.

The Notification is statutory and may be assigned S.R.O number.

Memo No. 7901 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Director, Govt. of India, Ministry of Environment and Forest and Climate Change (F.C. Division) Indira Paryavaran Bhawan, Jor Bagh, Aliganj Road, New Delhi-110003/ Additional Principal Chief Conservator of Forests (Central) Govt. of India, MoEF&CC, Eastern Regional Office, A/3, Chandrasekharpur, Bhubaneswar-23 for information and necessary action.

Memo No. 7902 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Revenue and Disaster Management Department/ Director of Land Records and Surveys, Odisha, Cuttack/ R.D.C (SD), Berhampur/ Collector, Rayagada/ Tahasildar, Bissamcuttack, Dist-Rayagada for information and necessary action.

Memo No. 7903 /F&E Date 18.04.19

Copy forwarded to the PCCF, Odisha / Addl. PCCF, Forest Diversion & Nodal Officer, FC Act, O/o the PCCF, Odisha / RCCF, Koraput Circle/ DFO, Rayagada Forest Division for information and necessary action.

Memo No. 7904 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the OIC, State Portal, NIC, IT Department, Odisha Secretariat, Bhubaneswar/ M/s Luminous Infoways Pvt. Ltd., Sadhana, N-6/373, Nayapalli, Jayadev Vihar, Bhubaneswar-15 for information and necessary action/ 5 spare copies for Guard file."

Memo No. 7905 /F&E Date 18.04.19

Special Secretary to Government

Copy forwarded to the Under Secretary to Government, Office Establishment Section, F&E Department for information and necessary action with reference to their letter No.21646/ F&E dtd.22.11.2016.

Special Secretary to Government



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 5

Ref. No

Date

UNDERTAKING BY USER AGENCY.

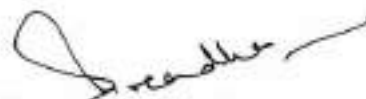
[Ref: Condition no (iv) of Stage-I approval Order]

This is to undertake that

- Out of 14.585 ha of non-forest land within mining lease, 2.167 ha will be maintained as safety zone and remaining 12.418 ha of private land shall not be utilized in any manner for the purpose of mining and related ancillary activities, except 0.081 ha for future Exploration & Utilization, and shall remain untouched.
- 86 no. of trees present on such land have been enumerated which are to be kept intact at project cost.
- Large number of local species will be planted over 0.081 ha of non-forest land which is not under mining Plan/ scheme.
- The details of such plantation will be provided to the DFO and the Regional office of MoEF&CC, Bhubaneswar.

For M/s Pradhan Industries,


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Ref. No

Date

UNDERTAKING BY USER AGENCY.

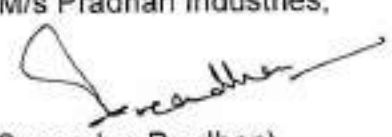
[Ref. Condition no (vii) of Stage-I approval Order]

This is to undertake that in compliance of the rule 41 of the Mineral Conservation and Development Rule, 1988 the restoration of flora in the entire lease area (58.704 ha) will be done in such a manner so as

- To cause least damage to the flora of the area held under mining lease and the nearby areas.
- To take immediate measure for planting in the same area or any other area selected by the Controller General or the authorized officer not less than twice the number of trees destroyed by reason of any mining operations;
- To look after them during the lease period after which these trees shall be handed over to the State Forest Department or any other authority as may be nominated by the Controller General or the authorized officer; and
- Restore, to the extent possible, other flora destroyed by prospecting or mining operation.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 7

Ref. No

Date

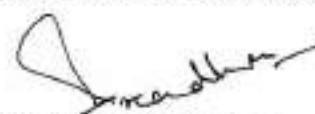
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (viii) of Stage-I approval Order]

This is to undertake that the details of such number of trees to be felled on forest as well as non-forest area in the lease and plantation of double the number of trees in the lease area or outside will be provided to the Divisional Forest Office, Rayagada and the Regional Office of the Ministry for monitoring such plantation efforts by the company.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.

Annexure-8

Subject: Email Alert of CL Payment

From: monitoring-fc@nic.in

To: pradhanindustriesgmo@yahoo.com

Cc: monitoring-fc@nic.in

Date: Thursday 12 January 2017, 3:25:10 PM IST

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/22508/2016 |
| Application No | MIN225082016088 |
| Proposal Name | Balnibasa Graphite Mine |
| Category | Mining |
| Submission Date | 22 Nov 2016 |
| Area Applied | 4.538 |
| Transaction Status | Transaction Successful |
| Transaction Reference Number | 524542677 |
| Transaction Date | 10 Jan 2017 |
| Payment Amount(in Rs.) | 27567788/- |
| Bank | Union Bank Of India |
| Payment Mode | NEFT/RTGS (Challan) |

| Funds Demand Details | |
|---------------------------------------|------------------|
| Compensatory Afforestation | : Rs. 0/- |
| 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. 27567788/- |
| Total Amount | : Rs. 27567788/- |

1000

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0893-3200/98/1603-0295\$05.00/0

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|---|---|
| <p>1. 1990年1月1日</p> <p>2. 1990年1月1日</p> <p>3. 1990年1月1日</p> | <p>1. 1990年1月1日</p> <p>2. 1990年1月1日</p> <p>3. 1990年1月1日</p> |
|---|---|

Approximate Words: 400-450, Seventy-Five (75) Sentences
 Unit 1: South America and Eight (8) Pages (18)

| | |
|-------------------|-------------------|
| 1. <u>प्रश्न</u> | 2. <u>उत्तर</u> |
| 3. <u>प्रश्न</u> | 4. <u>उत्तर</u> |
| 5. <u>प्रश्न</u> | 6. <u>उत्तर</u> |
| 7. <u>प्रश्न</u> | 8. <u>उत्तर</u> |
| 9. <u>प्रश्न</u> | 10. <u>उत्तर</u> |
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| 25. <u>प्रश्न</u> | 26. <u>उत्तर</u> |
| 27. <u>प्रश्न</u> | 28. <u>उत्तर</u> |
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| 81. <u>प्रश्न</u> | 82. <u>उत्तर</u> |
| 83. <u>प्रश्न</u> | 84. <u>उत्तर</u> |
| 85. <u>प्रश्न</u> | 86. <u>उत्तर</u> |
| 87. <u>प्रश्न</u> | 88. <u>उत्तर</u> |
| 89. <u>प्रश्न</u> | 90. <u>उत्तर</u> |
| 91. <u>प्रश्न</u> | 92. <u>उत्तर</u> |
| 93. <u>प्रश्न</u> | 94. <u>उत्तर</u> |
| 95. <u>प्रश्न</u> | 96. <u>उत्तर</u> |
| 97. <u>प्रश्न</u> | 98. <u>उत्तर</u> |
| 99. <u>प्रश्न</u> | 100. <u>उत्तर</u> |



RTGS

UTR NO - BK18417010512274

Date - 10/01/2017


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

My Account - My Proposals Environment Clearance - My Proposals Forest Clearance - My Proposals Wildlife Clearance - Help -

| Proposal Detail | Application No | Application Fee (Rs.) | Date of TM-PRINCIPLE | Amount to be Paid/ Amount Paid (in Rs.) | Payment Status | Payment Detail | Demanded Under |
|---|----------------|-----------------------|----------------------|---|----------------|---|---|
| 24-05-2017-1011
24-05-2017-1011
24-05-2017-1011 | 0174403010096 | 1000000.00 | 22-05-2017 | 1000000.00 | Paid | Fund Demanded Verified by
Nodal Officer On
Bank Name
Mode of Payment
Challan Generated On
Transaction Date | 127 Hec 2018
(Corporation Bank)
127 Hec 2018
127 Dec 2017
29 Dec 2017 |
| 24-05-2017-1012
24-05-2017-1012
24-05-2017-1012 | 0174403010096 | 1000000.00 | 21-Aug-2017 | 1000000.00 | Paid | Fund Demanded Verified by
Nodal Officer On
Bank Name
Mode of Payment
Challan Generated On
Transaction Date | 127 Hec 2017
(Corporation Bank)
127 Hec 2017
127 Dec 2017
29 Dec 2017 |
| 24-05-2017-1013
24-05-2017-1013
24-05-2017-1013 | 0174403010096 | 1000000.00 | 21-Aug-2017 | 1000000.00 | Paid | Fund Demanded Verified by
Nodal Officer On
Bank Name
Mode of Payment
Challan Generated On
Transaction Date | 127 Hec 2017
(Corporation Bank)
127 Hec 2017
127 Dec 2017
29 Dec 2017 |
| 24-05-2017-1014
24-05-2017-1014
24-05-2017-1014 | 0174403010096 | 1000000.00 | 21-Aug-2017 | 1000000.00 | Paid | Fund Demanded Verified by
Nodal Officer On
Bank Name
Mode of Payment
Challan Generated On
Transaction Date | 127 Hec 2017
(Corporation Bank)
127 Hec 2017
127 Dec 2017
29 Dec 2017 |
| 24-05-2017-1015
24-05-2017-1015
24-05-2017-1015 | 0174403010096 | 1000000.00 | 21-Aug-2017 | 1000000.00 | Paid | Fund Demanded Verified by
Nodal Officer On
Bank Name
Mode of Payment
Challan Generated On
Transaction Date | 127 Hec 2017
(Corporation Bank)
127 Hec 2017
127 Dec 2017
29 Dec 2017 |


DIVISIONAL FOREST OFFICER
Muzaffargarh Division

OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS
(WILDLIFE) & CHIEF WILDLIFE WARDEN, ODISHABDA APARTMENT, 5TH FLOOR, PRAKRUTI BHAWAN, NILAKANTHA NAGAR, BBSR-12

Ph. No.0674-2564587, FAX No.0674-2565062

(Website:odishawildlife.org, E. mail: odishawildlife@gmail.com)

No. 6798 /1WL-FC-147/2016Dated, Bhubaneswar the 29 July, 2017

M/s Pradhan Industries,
Regd. & Head Office – Telenga Bazar,
Near Purighat Police Station,
Cuttack – 7

6141
12/9/17

Sub: Approval of Site Specific Wildlife Conservation Plan in respect of Bainibasa Graphite Mine & Beneficiation Plant by M/s Pradhan Industries at Bainibasa in Muniguda Tahsil under Rayagada District

Sir,

It is to inform you that you have to implement a Site Specific Wildlife Conservation Plan for your Graphite Mine & Beneficiation Plant at Bainibasa in Muniguda Tahsil under Rayagada District in compliance to Standard ToR No.18 prescribed by Govt. of India, MoEF&CC in their letter No.J-11015/16/2017-IA.II(M) dt 13.04.2017 for preparation of EIA/EMP report.

2. The Site Specific Wildlife Conservation Plan in respect of the above project has been approved by the undersigned with financial forecast of **₹67.655 lakh** (Rupees sixty-seven lakh sixty-five thousand five hundred) only for the following activities.

| | | |
|---------------------|---|---------------------|
| a. | For activities to be implemented by the user agency in project area | ₹23.755 lakh |
| b. | For activities to be implemented by DFO, Rayagada Division in project impact area | ₹43.900 lakh |
| Grand Total: | | ₹67.655 lakh |

3. Various activities in the diverted area will be executed by the Project proponent under the guidance of the Divisional Forest Officer, Angul Division. A sum of ₹43.90 lakh only may be deposited in the CAMPA fund meant for the purpose for implementation of various activities within the project impact area by the Forest Deptt. as envisaged in the plan.

P.T.O.

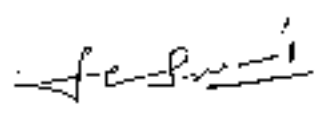
APPROVED
12/9/17

4. You may please note the following conditions for future compliance.

- This Plan may be revisited after 5 years and the User Agency will give undertaking to contribute towards the revised cost of the conservation plan till the project period, if any.
- The project proponent has to prepare and submit the Conservation Plan for the next 10 years of their lease period (balance period for which forest land remains diverted) at least one year before the expiry of the present Conservation Plan and deposit the outlay amount upon its approval. In case of delay, it will be dealt as per law for violations of Forest Conservation Act, 1980 and Environment (Protection) Act, 1986.
- The project proponent has to give an undertaking to bear the differential cost in case of enhancement of wage rate at the time of implementation of this plan.

Yours faithfully

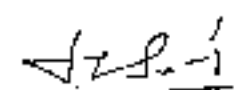
Encl: 2 copies of approved
site specific WL Conservation Plan


**Principal Chief Conservator of Forests (WL)
& Chief Wildlife Warden, Odisha**

Memo No. 6799 / date 29/07/17

Copy forwarded for information and necessary action to -

1. Special Secretary to Govt. of Odisha, F&E Deptt., Bhubaneswar
2. Principal Chief Conservator of Forests, Odisha
3. Regional Chief Conservator of Forests, Koraput Circle with reference to his memo No.2509 dt 29.06.2017
- ✓ 4. Divisional Forest Officer, Rayagada Division alongwith a copy of the approved site specific wildlife conservation plan with reference to his memo No.3964 dt 26.07.2017


**Principal Chief Conservator of Forests (WL)
& Chief Wildlife Warden, Odisha**

| AGENCY COPY | |
|---|---|
| NEFT / RTGS CHALLAN for Ad-HOC CAMPA | |
| Date : 10-01-2019 | |
| Agency Name. | PRADHAN INDUSTRIES |
| Application No. | 5824824138 |
| MoEF/SG File No. | 8-58/2017-FC |
| Location. | ORRISA |
| Address. | Telenga Bazar Near Purighat Police Station CuttaCutlack |
| Amount(in Rs) | 10615438/- |
| Amount in Words :One Crore Six Lakh Fifteen Thousand Four Hundred and Thirty-Eight Rupees Only | |
| NEFT/RTGS to be made as per following details; | |
| Beneficiary Name: | ORRISA CAMPA |
| IFSC Code: | CORP000371 ✓ |
| Pay to Account No. | 150825824824138 ✓
Valid only for this challan amount. |
| Bank Name & Address: | Corperation Bank
Lodhi Complex Branch,
Block 11,CGO Complex,
Phase I, Lodhi Road, New
Delhi -110003 |
| <ul style="list-style-type: none"> This Challan is strictly to be used for making payment to CAMPA by NEFT/RTGS only This challan is valid only for seven days. | |

After making successful payment, User Agencies may
Email: helpdeskcompa@corpbank.co.in

8410819010889932



DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

| BANK OF INDIA.....Branch | |
|--|-------------------|
| Please Issue/ send (Tick) | DD PO MT TT |
| ON | |
| Please effect Star Insta (RTGS) / EFT on | |
| Center | |
| Bank | Corperation |
| Branch | Lodhi complex New |
| In Favour of Mr./Mrs./Dr./Messrs | |
| ORRISA CAMPA | |
| Amount of Draft/Pay order/MT/TT/RTGS/EFT | |
| Rs 10615438/- | P |
| Exchange Rs | P |
| Postage Rs | P |
| Telegram Rs | P |
| Total Amount Rs. 10615438/- | P |
| Details of Cheques or Cash Deposited | |
| Branch | Cheque No. |
| | 031630 |
| Received By | |

UTR No - BKIDH19010889932



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 11

Ref. No

Date

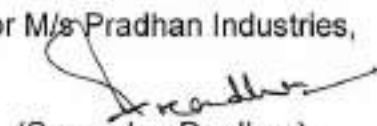
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xii) of Stage-I approval Order]

This is to undertake that any change in the existing Mining Plan, as approved by the competent authority, will be compulsorily informed to the State Forest Department and the Regional Office before actual change on the ground. The instructions of Forest Department and Regional Office will be binding on the user agency.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 12

Ref. No

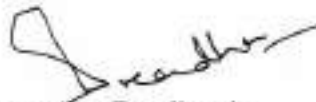
Date

UNDERTAKING BY USER AGENCY.

[Ref. Condition no (xiii) of Stage-I approval Order]

This is to undertake that the FC approval will be coterminous with the lease period i.e. up to 50 years from date of execution of ML on 10.01.2017 or the date of closure of the mine whichever is earlier.

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

OFFICE OF THE REGIONAL CHIEF CONSERVATOR OF FORESTS, KORAPUT CIRCLE, KORAPUT.

(office) 06852-251224 (Telefax), Res 06852-250642, Mob. 09437079696

E MAIL: rcfkoraput@gmail.comMemo No. 3135 /1F (Project) 57/ 2018 Dated 06.10.2018

To

The Divisional Forest Officer
Rayagada Forest Division

Sub:

Diversion of 44.038 ha. of forest land including 9.286 h. forest land in safety zone within total ML area of 58.704 ha. in Bainibasa Graphite Mining lease of M/s Pradhan industries located in Bainibasa village under Muniguda tahasil of Rayagada district. (Proposal No. FP/OR/MIN/24824/2017)

Ref:

Your Memo No.4741 dt 26.09.2018

The 10 (Ten) of schemes in connection with the following conditions imposed in the Stage-I approval order communicated by the GOI, MoEF & CC, New Delhi vide their Letter F.No.8-58/2017-FC dt 22.01.2018 in respect of the above mining project are hereby approved by the undersigned.

| SI No | Condition number | Scheme submitted for the condition | To be executed by | Approved cost (Rs.) |
|-------|------------------|--|-------------------|--------------------------|
| 1 | XI | The lessee has to carry out reclamation of the ML area as per the provision of the approved reclamation plan. Therefore, the lessee has to submit phased reclamation plan (as per provision of para-5.2 (i)(a) of FC Act guidelines) for its implementation at project cost. | User agency | No financial implication |
| 2 | XIV (a) | Mitigative measures to minimize soil erosion and choking of stream shall be implemented within a period of 3 years with effect from the issue of stage-II clearance in accordance with the approved plan in consultation with the State Forest Deptt. | User agency | Rs 5,28,500/- |
| 3 | XIV (b) | Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the ML to arrest soil erosion in accordance with the approved scheme. | User agency | Rs 6,67,300/- |
| 4 | XIV (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. | User agency | Rs 37,41,800/- |
| 5 | XIV (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 28° and | User agency | No financial implication |
| 6 | XIV (e) | No damage shall be caused to the top soil and the user agency will follow the top soil management plan. | User agency | Rs 10,68,100/- |

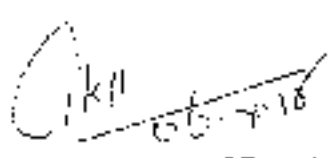
| Sl No | Condition number | Scheme submitted for the condition | To be executed by | Approved cost (Rs.) |
|---|------------------|---|-------------------|---------------------|
| 7 | XX | <u>First Part</u>
Fencing, protection and regeneration of the safety zone area (7.5 meters strip shall be kept within the ML boundary and area of the safety zone shall be part of the total area of ML as per the Ministry's guidelines dt 27.05.2015) shall be done within 3 year at the project cost from the issue of stage-II clearance. | User agency | Rs.31,09,000/- |
| 8 | XX | <u>Second Part</u>
Besides this, afforestation on degraded forest land to be selected elsewhere measuring 1.5 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 snapo files and afforestation will be done within 3 years from the date of stage-II clearance and maintained thereafter in accordance with the approved plan in consultation with the State Forest Department. | DFC, Rayagada | Rs. 58,710/- |
| 9 | XXXI | User agency either himself or through the State Forest Department shall undertake gap planning and soil & Moisture conservation activities to restock and rejuvenate the degraded open forests (having crown density less than 3.40) if any, located in the area within 100 meter from outer perimeter of the ML. The plan for plantation in SMC activities will be prepared and submitted to MoEF & CC before stage-II clearance. | NFO Rayagada | Rs 13,53,000/- |
| 10 | XXXIV | 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 ML 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. | User agency | Rs 30,08,000/- |
| Total financial cost as per schemes submitted | | | | Rs1,35,34,410/- |

Page-2..

The above schemes approved by the undersigned in seven copies of each are returned here with for taking further action at your level. You are requested to furnish Stage-I compliance in full complete in all respects on the conditions imposed in Stage-I approval order by the GOI, MoEF & CC, New Delhi vide their Letter F.No.8-58/2017-FC dt. 22.01.2018, additional condition stipulated by the GOI, MoEF ERO, Bhubaneswar vide Letter No. 5-ORA/300/2018-BHU dt. 07.03.2018. In addition to the conditions stipulated by MoEF & CC, the compliance on stipulations imposed by Govt. of Odisha F&E department vide their Letter No.2495/F&E dt.01.02.2018 may also be furnished along with connected records / reports to this office for taking further action.

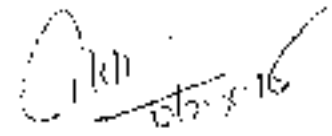
Encl:- 10 Nos. schemes in 06 copies of each

Totals 60 Nos. Schemes


Regional Chief Conservator of Forests
Koraput Circle, Koraput.

Memo No. 3136 dt. 06-10-2018

Copy forwarded to the Additional PCCF (Forest Diversion & Nodal Officer.. FC Act) O/O the PCCF, Odisha Bhubaneswar for favour of kind information.


Regional Chief Conservator of Forests
Koraput Circle, Koraput

OFFICE OF THE REGIONAL CHIEF CONSERVATOR OF FORESTS, KORAPUT CIRCLE, KORAPUT.
Phone (office) 06852-251284 (Telefax), Res 06852-250642, Mob. 09437079696
E MAIL: rccfkoraput@gmail.com

Memo No. 1951 /1F(Project) 36 / 2019 Dated 19 07 2019

To
The Divisional Forest Officer
Rayagada Forest Division

Sub:
45/2
22/7/19
Diversion of 44.038 ha of forest land including 9.286 ha of forest land in Safety Zone within total ML area of 58.704 ha in Bainibasa Graphite Mining lease of M/s Pradhan Industries, Cuttack located in Bainibasa village under Muniguda Tahasil of Rayagada district, Odisha for Graphite mining--
Approval of revised financial implication of schemes due to enhancement of wage rate.

Ref:

1. This office Memo No.3135 dt 06.10.2018.
2. Your Memo No.2974 / 4F (Misc)-1539 /19 dt 15.07.2019.

The revised financial implication of 8 (Eight) numbers of schemes submitted vide your memo under reference prepared at present wage rate of Rs 286.30 per Manday in connection with the conditions imposed in the Stage-I approval order communicated by the GoI, MoEF & C.C., New Delhi vide their Letter F No.8-58/2017-FC dt 22.01.2018 in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, Cuttack are hereby approved by the undersigned.

| Condition Number | Name of the scheme | Approved cost |
|------------------|--|----------------|
| xiv (a) | Scheme for mitigating measure to minimize soil erosion and chocking of stream. | Rs 6,64,000/- |
| xiv (b) | Scheme for planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within the mining lease to arrest soil erosion. | Rs 8,99,100/- |
| xiv (c) | Scheme for construction of check dams, retention / tow walls to arrest sliding down of the excavated materials along the contour. | Rs 56,38,800/- |
| xiv (e) | Scheme for management of top soil. | Rs 13,34,900/- |
| xx (Part-I) | Scheme for fencing, protection and regeneration of the safety zone area. | Rs 46,15,183/- |
| xx (Part-II) | Scheme for afforestation on degraded forest land measuring one and half times of safety zone area. | Rs 75,573/- |
| xxxii | 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 mining lease. | Rs 16,53,031/- |
| xxxiv | Scheme for de-siltation of village tanks coming within 5 Km radius of mining lease boundary. | Rs 37,56,800/- |

Further, the two numbers of schemes i.e. (1) Plan for reclamation of the ML area under provisions of Para-5.2(i) (a) of F.C.Act guidelines and (2) Scheme to stabilize overburden dump by grading / benching approved earlier vide this office Memo No.3135 dt 06.10.2018 remain unchanged.

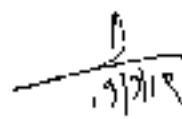
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The approved financial implication of the said schemes is sent herewith in duplicate for taking further action at your level.

In this regard, you are requested to furnish the point-wise Stage-I compliance complete in all respects along with required undertakings / documents.

In addition to the compliance of conditions imposed in Stage-I approval order of the GoI, MoEF & CC, the user agency is also required to comply with the additional conditions imposed by the State Government vide their Letter No.10F(Con)-289/2016-2495/F&E dated 01.02.2018 along with connected records.

Encl:- Financial Implication of schemes in two sets.


Regional Chief Conservator of Forests
Koraput Circle, Koraput

Memo No / Dated .07.2019.

Copy forwarded to the Addl. PCCF (Forest Diversion & Nodal Officer, FC Act), office of the PCCF, Odisha, Bhubaneswar for favour of kind information with reference to Memo No.2975 dated 15.07.2019 of the Divisional Forest Officer, Rayagada Forest Division.


Regional Chief Conservator of Forests
Koraput Circle, Koraput



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671- 2412299

Annexure - 13 (c)

Ref. No

Date

UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xiv) of Stage-I approval Order]

This is to undertake that the following activities shall be undertaken by the user agency at the project cost i.e.

- Mitigative measures to minimize soil erosion and choking of stream 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.
- Planting of adequate drought hardy plant species and sowing of seeds, in the appropriate area within the mining lease to arrest soil erosion is accord in accordance with the approved scheme;
- Construction of check dams, retention /toe walls to arrest sliding down of the excavated material along the contour in accordance with the approved scheme;
- Stabilize the overburden dumps by appropriate grading/benching, in accordance with the approved scheme, so as to ensure the angles of repose at any given place is less than 28° ; and
- No damage shall be causes to the top-soil and the user agency will follow the top soil management plan.

The activities will be implemented as per approved Schemes.

All the activities will be implemented by the User Agency.

For M/s Pradhan Industries,

(Sunandan Pradhan)
PARTNER.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION



PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriescto@yahoo.com

Ref. No

Date

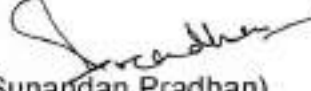
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xix) of Stage-I approval Order]

The User agency undertakes to pay the additional amount of NPV, if so determined, as per the final decision of the Hon'ble Supreme Court of India.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.

By Speed Post / Online

No. J-11015/16/2017-IA.II (M)
Government of India
Ministry of Environment, Forest and Climate Change
Impact Assessment Division

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

Dated: 23rd April, 2018

To,
M/s Pradhan Industries,
Telenga Bazar,
Cuttack-753009,
Odisha.
Email: pradhanindustriesgmo@yahoo.com

Sub.: Bainibasa Graphite Mining and Beneficiation Project with production capacity of 13,272 TPA (ROM) by M/s Pradhan Industries, located at Village - Bainibasa, P.O. Bhairabagada, Tehsil : Muniguda, Dist: Rayagada, Odisha (MLA-58.704ha)-Environmental Clearance regarding.

Reference: Online Proposal no. IA/OR/MIN/62694/2017.

Sir,
This has reference to your online application for the above mentioned EC proposal for Bainibasa Graphite Mining & Beneficiation Project of 13272 TPA (ROM) capacity in 58.704 Ha of M.L. area. The mine is located at Village - Bainibasa, P.O. Bhairabagada, Tehsil: Muniguda, Distt: Rayagada, Odisha. The mine lease falls between the latitudes and longitudes of 19°38'47.059"N to 19°38'08.76"N and longitude 83°30'14.78"E to 83°29'38.19"E and Survey of India topo sheet Nos. 65 M/6 and 65 M/10.

2. The proposal of terms of reference (TOR) was considered by the Expert Appraisal Committee in its meeting held during 20-21 March, 2017 to determine Terms of Reference (TOR) for undertaking detailed EIA study. The TOR was issued by MoEF&CC, vide Letter No. J 11015/16/2017-IA.II(M), Dated 13th April, 2017. Project Proponent submitted the EIA/EMP report online to the Ministry for seeking environmental clearance after conducting public hearing. The Consultant has presented the details of mine site using KML/SHP files on DSS.

3. The proposal of EC was earlier considered by the Expert Appraisal Committee in its meeting held during January 18-19, 2018 wherein the Committee deferred the Proposal sought the information/clarification. Based on the information submitted by Project Proponent, the proposal of EC was again appraised before the EAC meeting held during February 26th-27th, 2018 wherein the Committee recommended additional specific conditions for environmental clearance for Bainibasa Graphite Mining and Beneficiation Project with production capacity of 13272 TPA (ROM).

4. The mining lease has been granted by the Govt. of Odisha, Department of Steel & Mines, Bhubaneswar and registered for 50 years by the Collector, Rayagada on 11.01.2017. The lease validity of lease is up to 10.01.2067. The total M.L area is 48.704 hectares out of which, 14.585 hectares is privately owned non-forest land, 0.081 hectares Govt. non-forest waste land and 44.038 hectares forest land. Approval u/s 2(iii) of FC Act, 1980 has been obtained from MoEF&CC vide order F. no. 8-60/2016-FC dated 06.01.2017 for entire forest area i.e. 44.038 Ha. The PP also obtained the Stage-I FC u/s 2(II) of the FC Act, 1980 vide order No. 8-58/2016-FC dated 06.01.2017 for forest area i.e. 44.038ha. However, formal clearance is awaited. The Committee noted the same and informed the PP that Stage-I EC is a pre-requisite for grant of LC, hence, the same may be submitted to the Ministry soon after its grant. The Mining plan has been approved by BMM Bhubaneswar vide letter No. MP/OTPM/200RI/BIHJ/2016-17/097 dated 17.11.2016. The mineable reserve is reported as 1,34,736 tonnes and considering the rate of production, the mine life comes as 11 years.

5. PP informed that the ROM contains 6.23% Free Carbon (F.C.) on an average. In order to enhance the F.C. content, a pit-head Beneficiation Plant of 30TPH capacity will be established wherein out of 13,272 TPH throughput, it is expected to get an output (concentrate) of 841 TPA of (65-85% F.C. content). During the process of beneficiation, 12,044 TPA tailings will be generated which will be managed in the Tailing Pond over an area of 2.848 Ha. The Beneficiation Plant will be built-up over an area of 2.136ha. This will have mainly Rougher, Cleaner and Scavenger sections consisting of Ball Mill, Agitator and Flotation Chambers and will operate on froth floatation process. The final product is proposed to be transported to prospective buyers via road after Filtration, Drying & Packing.

6. Method of mining shall be open cast mechanized method for excavation of graphite ore with the help of machines like excavator, tipper & rear dump trucks of 10T capacity will be used for transportation of ore to the dispatch point, waste to the dumping site and sub-grade ore to the stacking site. A total of two quarries - I and II are proposed in the Mine Plan. The ultimate extent of the quarries will be confined to the area of 3.885 ha. The recovery factor for beneficiable ore and subgrade ore/mineral rejects has been considered at 0.9 and 0.1 respectively. Graphite ore having FC content of 5.51 % and size >200 mm generated from mine is being proposed to be fed to the a beneficiation plant of 30 TPH capacity. A series of flotation cells will be installed where the mineral will continuously travel from one cell to the next cell for repeated treatments. The floats in successive treatment become purer and are returned as a middling for further treatments. The air admitted forms bubbles which rise above on the cell to collect the graphite particles. The mineralized graphite bubbles collect as froth on the top, leaving the gangue particle which gets discharged from last cell and which is subsequently discarded. The only chemical reportedly added for froth floatation process is Turpentine oil. Top Soil of 32,450m³ will be generated during the plan period, which will be used for plantation & reclamation process. Overburden of 1,16,910 Cu.M. is likely to be generated during plan period which will be stacked in an earmarked area of 2,338 Ha at a height of 5m approximately. Mineral rejects of 2944 Cu.M. (Sub-grade Ore) will be stored separately and will be beneficiated after blending with higher grade graphite ore. The Committee noted the submissions of the PP and asked him to carryout mining operations strictly in accordance with EC conditions granted by MoEF&CC and approved mining plan.

7. Project Proponent submitted that out of the total lease area i.e. 58.704 Ha, an area of 3.885 Ha shall be mined at conceptual stage, 2.338 Ha shall be under Dumps, 2.945 Ha under mineral storage, 2.848 Ha under Tailing pond, 2.136 Ha under Mineral separation plant, 11.617 Ha shall be unutilised, 9.206 Ha under safety zone etc. as per the approved mine plan. The Committee, however, noted that the PP has provided land-utilisation pattern of 44.119 Ha only. The PP submitted that out of 58.704 Ha lease area, 14.585 ha is privately owned non-forest land which is restricted land and will not be utilized.

8. The baseline data was collected in the March, 2017 - May, 2017. The baseline monitoring results of ambient air, surface water, soil, ambient noise and ground water have been reported and the same were compared with respective prescribed ranges viz. NAAQS 2009 (for air monitoring), IS:10500-2012 (for ground water), IS:2296 for surface water and ambient noise limits prescribed by CPCB. The concentrations of PM₁₀ and PM_{2.5} for 8 AAQM stations were found between 21.5 to 48.7 µg/m³ and 9.7 to 23.3 µg/m³ respectively. The concentrations of SO₂ and NO₂ were found to be in range of 'Not Detectable' to 7 µg/m³ and 'Not Detectable' to 9.4 µg/m³ respectively. The Committee noted baseline ambient air quality is within the NAAQS limits. Noise levels vary from 46.3 to 52.3 dB(A) during day time and from 41.4 to 43.8 dB(A) during night time. Out of 8 locations, 6 are within CPCB prescribed limits whereas at two locations viz. Muniguda and Balrabyguda Road location, high values can be attributed to traffic movement and day to day commuters. The ground and drinking water analysis show that all groundwater samples conforms to the IS-2296 under Class -C and BIS 10500 for surface water and ground water respectively. The analysis result for soil shows that soil is neutral to slightly alkaline in nature and soil texture is loam (3 locations) and sandy loam (1 location). The Committee noted the impact prediction analysis carried out through modeling by the PP and noted that the resultant GLC's (Ground level concentrations) are within the prescribed limits due to undisturbed nature of the lease area.

9. PP submitted that out of the total lease area i.e. 58.704 Ha, an area of 3.885 Ha shall be mined at conceptual stage, 2.338 Ha shall be under Dumps, 2.945 Ha under mineral storage, 2.848 Ha under Tailing pond, 2.136 Ha under Mineral separation plant, 11.617 Ha shall be unutilised, 9.206 Ha under safety zone etc. as per the approved mine plan. The Committee, however, noted that the PP has provided land-utilisation pattern of 44.119 Ha only. The PP submitted that out of 58.704 Ha lease area, 14.585 ha is privately owned non-forest land which is restricted land and will not be utilized.

10. Project Proponent reported that there is the nearest Sanctuary is Kothagarh Sanctuary, which is about 23 Kms from the Project Site the mine lease area boundary. The Divisional Forest Officer, Rayagada has furnished the authenticated list of flora and fauna containing Schedule-I species vide letter no 2789/4F(Misc)1539/2017 dated 25.05.2017. The site specific Wild Life Management Plan has been approved by the PCCF (WL) and Chief Wild Life Warden, Odisha, vide his letter no. 6740 dated 29.07.2017 for ₹67.655 Lakhs for 5 years.

11. The Public Hearing was conducted on 28th November, 2017 at Banibasa village, Rayagada, Odisha. The Public Hearing was presided over by Additional District Magistrate. The major issues raised by the local villagers are related to proper implementation of the environmental management measures during mining operations, provision of employment for the locals, construction of local roads, development of local infrastructure like community centre/ educational institutes/

sanitation/ drinking water/ healthcare facilities leading to positive socio economic impact etc. The villagers asked the PP to ensure that the water of River Sakata remains decontaminated and adequate supply is ensured for downstream villages in dry season. PP submitted that the proposed mining project will benefit the region and for the same purpose, it has made a provision of ₹10.65 Lakhs in next five years under ESC apart from specified CSR activities under CSR program. The Committee observed that apart from the activities mentioned in ESC special emphasis on Antenatal care, Female Hygiene shall also be included. The Occupational hazard Plan also need to be revamped considering risk based approach and in line with DGMS requirements as the tailings generated from beneficiation plant contains heavy metals like Pb (lead). The Committee explained to the PP that the expenditure made towards addressing the issues raised in PI shall be covered under Enterprise Social Commitment (ESC) which will be exclusive of CSR budget and contribution made to the District Mineral Fund Project Proponent reported that there is no court case/ litigation pending against the project.

12. The total project cost is estimated to be ₹4.07 Crores. Similarly, an amount of ₹54.5 Lakhs (towards capital expenditure) and ₹4.96 Lakhs (towards recurring expenditure per annum) is earmarked for implementation of the environmental management plan

13. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the environmental clearance under the provisions thereof to the above mentioned proposal of M/s Pradhan Industries. **Bainibasa Graphite Mining & Beneficiation Project of 13272 TPA (ROM) capacity in 58.704 Ha of M.L. area, located at Village- Bainibasa, P.O. Bhatrabagada, Tehsil: Muniguda, Distt: Rayagada, Odisha in MLA 58.704ha** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:

A. Specific conditions

- 1) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Odisha and any other Court of Law, if any, as may be applicable to this project.
- 2) This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining project.
- 3) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- 4) The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Odisha and effectively implement all the conditions stipulated therein.
- 5) The Proponent should install online Ambient Air Quality Monitoring System and there should be system for display of digital AQI data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site.

- 6) The monitoring of PM_{2.5} in the vehicle emission shall be conducted to improve the mine environment and report submitted to the Regional Office of the MoEFCC.
- 7) PP shall run an awareness campaign on sanitation for women and utilization of Sanitary Napkin and also to distribute the Sanitary Napkin/pads to the women and provide the training for proper disposal.
- 8) PP shall take necessary permission for mining of sand (minor mineral) generated from the tailings of the beneficiation process of the Graphite ore inside the mining lease and be included in the concession agreement with due approval of the mining plan before selling sand to prospective buyers.
- 9) Implementation of Occupational hazard Plan on risk based approach and in line with DGMS requirements addressing the hazards from heavy metal such as lead (Pb) found in tailings.
- 10) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented.
- 11) The prevention measure for burns, malaria and provision of anti-snake venom including all other paramedical safeguards may be ensured before initiating the mining activities.

B. Standard conditions

- 1). A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.
- 2). No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.
- 3). No change in the calendar plan including excavation, quantum of mineral and waste should be made.
- 4). The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
- 5). Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of Mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS)

- 6). The lands which are not owned by Proponent, mining will be carried out only after obtaining the consents from all the concerned land owners as per the provisions of the Mineral Concession Rules, 1950 and MMDR Act, 1957.
- 7). Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.
- 8). The critical parameters as per the Notification 2003 such as PM_{10} , $PM_{2.5}$, NO_x and SO_x etc. in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS))]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.3 (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.
- 9). Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM_{10} and $PM_{2.5}$ such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification, 2009, as amended from time to time by the Central Pollution Control Board.
- 10). Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall 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 Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- 11). Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table.
- 12). Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate

Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.

- 13). Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.
- 14). The Illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night noise.
- 15). Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. In case of Belt-conveyors facilities the system should be fully covered to avoid air borne dust. Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.
- 16). Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
- 17). There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.
- 18). The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.
- 19). The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adapted to that micro climate.
- 20). 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 shall be used for land reclamation and plantation. The over burden (OB) generated during

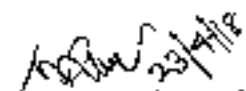
the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 60m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated 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. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.

- 21). 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 river 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 monsoon and maintained properly. The dams, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river 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.
- 22). Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
- 23). Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/S/2014 (A.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area", if any, applicable to the project.
- 24). The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees or such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of such trees should be promoted.
- 25). The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, 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. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

- 26). As per the Company Act, the CSR cost should be 2 % of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the 'Need based door to door survey' by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.
- 27). 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.
- 28). Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
- 29). Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- 30). Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.
- 31). A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- 32). The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.
- 33). The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- 34). The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
- 35). The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.

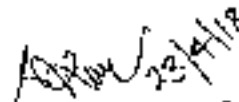
- 36). A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
 - 37). State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsilcar's Office for 30 days.
 - 38). The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of 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, Forest and Climate Change at www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.
14. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
15. Concealing factual data or submission of false/fabricated data and 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.
16. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Odisha and any other Court of Law relating to the subject matter.
17. 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.


 (Surendra Kumar)
 Advisor/Scientist 'G'

Copy to:

- 1). The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- 2). The Secretary, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
- 3). The Secretary, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- 4). The Secretary, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.

- 5). The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032
- 6). The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 751023.
- 7). The Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- 8). The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur-440 001.
- 9). The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K G. Marg, New Delhi-110001.
- 10). The District Collector, Rayagada District, State of Odisha.
- 11). Guard File.


 (Surendra Kumar)
 Advisor/ Scientist 'G'



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Annexure - 17

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0671 - 2412299
Fax : 0671 - 2423078

Factory : A/P.O.-LAXMIPUR-765013, KORAPUT, ODISHA, PHONE : 06855-268524
AT-BANDHAMANDI, P.O.- SIKARPAI, RAYGADA-765 001, PHONE : 06856-212022

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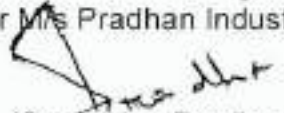
Date

Undertaking by User Agency.

[Ref: Conduction no (xxiii) of Stage-I approval Order]

This is to undertake that no labour camp shall be established in the Forest land.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For Mrs Pradhan Industries,

(Sunandan Pradhan)
PARTNER



PRADHAN INDUSTRIES

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Ref. No.

Date

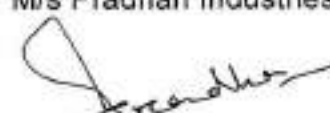
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxiv) of Stage-I approval Order]

It is to undertake that the User Agency shall provide fuels preferably alternate fuels to the labourers and the staff working at the site so as to avoid any damage and pressure on the nearby forest areas.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



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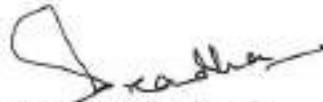
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UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxv) of Stage-I approval Order]

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

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.


**DIVISIONAL FOREST OFFICER
RAYGADA DIVISION**



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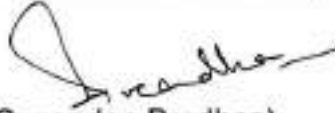
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UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxvi) of Stage-I approval Order]

It is to undertake that the layout plan of the mining plan/proposal shall not be change without the prior approval of the Central Government.

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.


DIVISIONAL FOREST OFFICER
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Ref. No

Date

UNDERTAKING BY USER AGENCY.

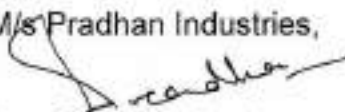
[Ref: Condition no (xxvii) of Stage-I approval Order]

WILL

This is to undertake that the forest land proposed not ~~to~~ be used for any purpose other than that specified in the proposal.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

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Ref. No

Date

UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxviii) of Stage-I approval Order]

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

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.


**DIVISIONAL FOREST OFFICER
RAYGADA DIVISION**



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Annexure- 23

Ref. No

Date

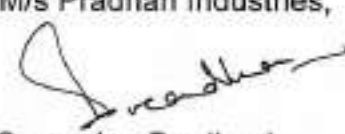
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxix) of Stage-I approval Order]

It is to undertake that no damage to the flora and fauna of the adjoining area shall be caused.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
0671 - 2412299

xxvll
Annexure - 24

Ref. No

Date

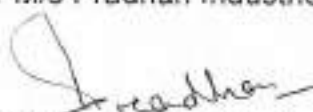
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxix) & (xxx) of Stage-I approval Order]

It is to undertake that no damage to the flora and fauna of the adjoining area shall be caused & any tree felling shall be done only when it is unavoidable and that too under strict supervision of the State Forest Department;


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER

FORM-II

(For projects other than linear projects)

Government of Odisha

Office of the District Collector, Rayagada

No. 3472/17

Dated 14/09/2017

TO WHOMSOEVER IT MAY CONCERN

In compliance of the Ministry of Environment and Forests (MoEF), Government of India's letter No. 11/9/2008-FC (pt.) dated 3rd August 2009 wherein the MoEF issued guidelines on submission of evidences for having initiated and completed the process of settlement of rights under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 ('FRA' for short) on the forest land proposed to be diverted for non-forest purposes, it is certified that 44.038 hectares of forest land proposed to be diverted in favour of M/s Pradhan Industries, Telenga Bazar, Cuttack-753009, Odisha. (name of user agency) for mining lease of Balmibasa Graphite Mine of M/s Pradhan Industries., (purpose for diversion of forest land) in Rayagada district falls within jurisdiction of Balmibasa village(s) in Muniguda Tahasil.

It is further certified that:

- The complete process for identification and settlement of rights under the FRA has been carried out for the entire 44.038 hectares of forest land proposed for diversion. A copy of records of all consultation and meetings of the Forest Rights Committee(s), Gram Sabha(s), Sub-Divisional Level Committee(s) and the District Level Committee are enclosed as annexure 'A' to annexure 'F'.
- The proposal for such diversion (with full details of the project and its implications, in vernacular/local language) has been placed before each concerned Gram Sabha of forest-dwellers, who are eligible under the FRA.
- The each of concerned Gram Sabha(s), 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 certificate issued by the gram Sabha of Balmibasa village(s) is enclosed as annexure 'G' to 'F'.
- The discussion and decisions on such proposals had taken place only when there was a quorum of minimum 50% of the members of Gram Sabha present.
- 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.
- The rights of Primitive Tribal Groups and Pre-Agricultural Communities, where applicable have been specifically safeguarded as per section 3(1)(c) of the FRA.

Enclosed: As above.

Mrs. Gita Poonam Thapa Kumar, IAS,
Collector & District Magistrate, Rayagada

Collector, Rayagada

14/09/2017

INTEGRATED TRIBAL DEVELOPMENT AGENCY, RAYAGADA

No. 3501 /XI-46/2017

Dated: 15-09-2017.

To

The Divisional Forest Officer,
Rayagada Division.

Sub: - Diversion of 44.038 hectares of Forest land in Village Bainibasa of Muniguda Tahasil for mining lease of Bainibasa Graphite Mines of M/s Pradhan Industries.

Ref: - You're Lr.No.7698/4F (Misc.)-1436/2016 dated 17-11-2016.

Sir,

With reference to the letter cited above on the subject, it is to furnish herewith required certificate in 06 (six) copies in prescribed Form-II along with Forest Right Committee Resolution, Special Gram Sabha Resolution in both Oriya and English, proceeding of SDLC Meeting on FRA, Gunupur and proceeding of DLC Meeting on FRA in respect of Village Bainibasa under Muniguda Tahasil for diversion of 44.038 hectares of forest land to non-forest purpose of the aforesaid village for mining lease of Bainibasa Graphite Mines of M/s Pradhan Industries.

Further necessary action in the matter may be taken at your level under intimation to the undersigned.

Enclosed: As above.

Yours faithfully,


Collector, Rayagada
Collector, Rayagada
Dated: 15-09-2017.

Memo No 3502/2017

Copy to the Dy. Collector (Revenue), Collectorate, Rayagada for information and necessary action.


Collector, Rayagada
Collector, Rayagada
Dated: 15-09-2017.

Memo No 3503/2017

Copy forwarded to M/s Pradhan Industries, Telenga Bazar, Cuttack-753009 for information.


Collector, Rayagada
Collector, Rayagada

କାର୍ଯ୍ୟକାରୀ ଗ୍ରାମରୁ ଜିଲ୍ଲା ସ୍ତରୀୟ କମିଟି ପରିଚାଳିତ ହେଉଥିବ

ଗ୍ରାମ ପରିଷଦ ପରିଚାଳିତ

ସମ୍ପର୍କିତ ସମିତି - ଗ୍ରାମରୁ

କମିଟିର ସମ୍ପର୍କ - ଗ୍ରାମରୁ ପ୍ରାଥମିକ ସ୍ତରୀୟ

ସମ୍ପର୍କ - ଗ୍ରାମରୁ ପ୍ରାଥମିକ ସ୍ତରୀୟ

ସମ୍ପର୍କ - ଗ୍ରାମରୁ ପ୍ରାଥମିକ ସ୍ତରୀୟ

ସମ୍ପର୍କିତ ଜିଲ୍ଲା ସ୍ତରୀୟ କମିଟି ସହଯୋଗୀ ସଂସ୍ଥାଙ୍କ ସ୍ୱାଗତ

| କ୍ର.ସଂ | ସଂସ୍ଥାଙ୍କ ନାମ | ସ୍ତର | ସ୍ୱାଗତ |
|--------|-------------------|-------|-------------------|
| ୧ | ଗ୍ରାମରୁ ସିନିଆ | ସହାୟକ | ସିନିଆ ସିନିଆ |
| ୨ | ଜଗନ୍ନାଥ ସିନିଆ | ସହାୟକ | ଜଗନ୍ନାଥ ସିନିଆ |
| ୩ | ବିଜୁ ସିନିଆ | ସହାୟକ | ବିଜୁ ସିନିଆ |
| ୪ | ଦ୍ରୁମା ବାଲେଶ୍ୱରୀ | ସହାୟକ | ଦ୍ରୁମା ବାଲେଶ୍ୱରୀ |
| ୫ | ବ୍ରହ୍ମା ସିନିଆ | ସହାୟକ | ବ୍ରହ୍ମା ସିନିଆ |
| ୬ | ସୁଧାକର କାନ୍ତାଳୀ | ସହାୟକ | ସୁଧାକର କାନ୍ତାଳୀ |
| ୭ | ମାନ୍ଦିକ ସିନିଆ | ସହାୟକ | ମାନ୍ଦିକ ସିନିଆ |
| ୮ | ଦ୍ୱାରକା କୁମ୍ଭକାରୀ | ସହାୟକ | ଦ୍ୱାରକା କୁମ୍ଭକାରୀ |
| ୯ | ସୁଧାକର କାନ୍ତାଳୀ | ସହାୟକ | ସୁଧାକର କାନ୍ତାଳୀ |
| ୧୦ | ବ୍ରହ୍ମା ସିନିଆ | ସହାୟକ | ବ୍ରହ୍ମା ସିନିଆ |

ସମସ୍ତ ଗ୍ରାମରୁ ପ୍ରାଥମିକ ସ୍ତରୀୟ କମିଟିର ସମ୍ପର୍କ - ଗ୍ରାମରୁ ପ୍ରାଥମିକ ସ୍ତରୀୟ

କାର୍ଯ୍ୟକାରୀ ଗ୍ରାମରୁ ଜିଲ୍ଲା ସ୍ତରୀୟ କମିଟି ପରିଚାଳିତ ହେଉଥିବ

ମୁଖ୍ୟମନ୍ତ୍ରୀଙ୍କ ସ୍ୱାଗତୀୟ ସମ୍ବୋଧନା ଉପରେ ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ । ଆଜି
 ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ । ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ । ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ ।
 ଓ ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ । ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ । ଉଲ୍ଲେଖ କରିବା ପାଇଁ ଧନ୍ୟବାଦ ।

Jalandhar, Punjab

ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -

ଉପାଧ୍ୟକ୍ଷ
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -

ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 Sarapanch
 Bhairabagada G.P.

ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -

ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -
 ଉପାଧ୍ୟକ୍ଷ -

Welfare Extension Office
 Bhairabagada, Dist. Rayagada

PROCEEDING OF THE FOREST RIGHT COMMITTEE. MEETING OF BAINIBASA VILLAGE.

GRAMPANCHYAT: BAHIRABGARH.
BLOCK: MUNIGUDA
DATE: 19.12.2018. TIME: 10.00 A.M.
PLACE: INFRONT OF ANGANABADI CENTRE

Signature of the participating members of the Forest Right Committee.

| Sl.No. | Name of the committee member | Designation |
|--------|------------------------------|-------------|
| 1 | Ramchandra Sikaka. | President |
| 2 | Jalandhar Sikaka. | Secretary |
| 3 | Relly Sikaka. | Member. |
| 4 | Dimka Jakesika. | Member. |
| 5 | Laxman Sikaka. | Member. |
| 6 | Ydhisra Kodraka. | Member. |
| 7 | Rajib Sikaka. | Member. |
| 8 | Lodana Kusurana. | Member. |
| 9 | Sktu Kandamako. | Member. |
| 10 | Katrabeti Sikako. | Member. |

Signature

[Signature]

Jalandhar Sikaka

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

Jalandhar Sikaka

Secretary
FRC, Bainibasa

[Signature]

Sarapancho.
Sarapancho
Bhairabgarh

President.

[Signature]

[Signature]

[Signature]

A special meeting of the Forest Rights Committee of Bainibasa Village was organized to day i.e. dt.19.12.2016 at 10.00 A.M. at Anganabadi Centre. Sri Rama Chandra Sikaka, President of the Forest Right committee presided over the meeting.

Proposal No.1 : It was unanimously accepted to convert the KISSAM of following forest land to non-forest land for mining purpose based on the letter No.1/16 dt.26.11.2016 of the Sarapancha Bhairabgad. It was discussed thoroughly and the member were informed adequately On the matter.

LAND DETAILS.

| Mouza | Khata No. | Plot No. | Area in Ac. | KISSAM | Revised KISSAM | Remark |
|--------------|-----------|----------|-------------------|--------------|----------------|--------|
| Bainibasa | 18 | 125 | 1.93 | Bada Jungle | Non forest | Part. |
| Bainibasa | 16 | 22 | 0.10 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 49 | 29.43 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 51 | 46.57 | Patra Jungle | Non forest | |
| Bainibasa | 16 | 57 | 0.11 | Patra Jungle | Non forest | |
| Bainibasa | 16 | 59 | 2.40 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 64 | 5.57 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 111 | 6.52 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 123 | 16.19 | Patra Jungle | Non forest | Part. |
| TOTAL | | | 108.82 Ac. | | | |

At the end, the meeting concluded with thanks to the president.

Jalendra Nath Sikaka

Secretary
Muniguda, Rayagada

Rama Chandra Sikaka
President
Bhairabgad, Rayagada
Date: _____

Copy of the letter submitted with the Collector, Rayagada/Sub-Collector, Eunupur./Project Administrator Integrated Tribal Development Agencies(Nodal Officer,FRC,Rayagada)/Block Development Officer,Muniguda./Sarpanch,Bhairabgad, C.P.for favour of information and necessary action

Jalendra Nath Sikaka
Secretary.

Rama Chandra Sikaka
Sarpanch.

Rama Chandra Sikaka
President.
Bhairabgad, Rayagada
Date: _____

[Signature]
Muniguda, Rayagada

[Signature]
Sarpanch.

1. 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20 2020/01/20

අපේක්ෂා කළ පරිදි, ප්‍රධාන අංශයේ දින 10 ක් තුළින් අපේක්ෂා කළ පරිදි ප්‍රතිඵල ලැබුණි. අපේක්ෂා කළ පරිදි, ප්‍රධාන අංශයේ දින 10 ක් තුළින් අපේක්ෂා කළ පරිදි ප්‍රතිඵල ලැබුණි. අපේක්ෂා කළ පරිදි, ප්‍රධාන අංශයේ දින 10 ක් තුළින් අපේක්ෂා කළ පරිදි ප්‍රතිඵල ලැබුණි.

අනුමත ප්‍රතිඵල

| අනුමත ප්‍රතිඵල | ප්‍රතිඵල | ප්‍රතිඵල | ප්‍රතිඵල | ප්‍රතිඵල | ප්‍රතිඵල | ප්‍රතිඵල |
|-------------------|----------|----------|----------|----------------|----------------|----------------|
| 1. අනුමත ප්‍රතිඵල | 18 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 2. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.10 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 3. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 4. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 5. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 6. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 7. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 8. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |
| 9. අනුමත ප්‍රතිඵල | 16 | 135/P | 10.93 | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල | අනුමත ප්‍රතිඵල |

මෙම ප්‍රතිඵලයන් ප්‍රධාන අංශයේ අනුමත ප්‍රතිඵලයන් ලෙස සලකා බැලිය යුතුය.

ଏ ପ୍ରତିକାରଣ ପ୍ରକ୍ରିୟା ପ୍ରାୟତଃ କାର୍ଯ୍ୟକାରୀ ହେଉଥିବା ସତ୍ତ୍ୱେ ମଧ୍ୟ ଏହାକୁ କାର୍ଯ୍ୟକାରୀ କରିବା ପାଇଁ ଆବଶ୍ୟକ ପଦକ୍ଷେପ ଗ୍ରହଣ କରିବାକୁ ଅନୁରୋଧ କରାଯାଉଅଛି । ଏହାଛଡ଼ା ଏହାକୁ କାର୍ଯ୍ୟକାରୀ କରିବା ପାଇଁ ଆବଶ୍ୟକ ପଦକ୍ଷେପ ଗ୍ରହଣ କରିବାକୁ ଅନୁରୋଧ କରାଯାଉଅଛି ।

ଆପଣଙ୍କ ସହଯୋଗ
Jalandhar Singh
ଅଧ୍ୟକ୍ଷ

କିନ୍ତୁ ଏହାକୁ କାର୍ଯ୍ୟକାରୀ କରିବା ପାଇଁ ଆବଶ୍ୟକ ପଦକ୍ଷେପ ଗ୍ରହଣ କରିବାକୁ ଅନୁରୋଧ କରାଯାଉଅଛି । ଏହାଛଡ଼ା ଏହାକୁ କାର୍ଯ୍ୟକାରୀ କରିବା ପାଇଁ ଆବଶ୍ୟକ ପଦକ୍ଷେପ ଗ୍ରହଣ କରିବାକୁ ଅନୁରୋଧ କରାଯାଉଅଛି ।

Jalandhar Singh
ଅଧ୍ୟକ୍ଷ
ଜଣେ ଲୋକସଭା ସଭ୍ୟ
ବାରିପଦା, ଗୋବିନ୍ଦପୁର ।

ଶ୍ରୀ ଲୋକସଭା ସଭ୍ୟ
ଜଣେ ଲୋକସଭା ସଭ୍ୟ
ବାରିପଦା, ଗୋବିନ୍ଦପୁର ।

R.K. Singh
28-11-16

Welfare Extension Office
Muniguda, Dist- Rayagada

ସୂଚନା ଶ୍ରୀମତୀ ଚନ୍ଦ୍ରାବତୀ ଦେବୀଙ୍କ ନାମରେ

ପ୍ରାଥମିକ :- ଶ୍ରୀମତୀ ଦେବୀ

ଚନ୍ଦ୍ରାବତୀ ଦେବୀଙ୍କ - ୧୩ ୨୦୧୨/୨୦୧୩

ପ୍ରାଥମିକ :- ସୂଚନା ୧୦ ବର୍ଷ

ଚନ୍ଦ୍ରାବତୀ ଦେବୀଙ୍କ - ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ ପ୍ରମୁଖ୍ୟତା

ବିଭାଗୀୟ ସୂଚନା ଓ ସୂଚନା

୧. ଚନ୍ଦ୍ରାବତୀ ଦେବୀ 
୨. ବିଭାଗୀୟ ସୂଚନା 
୩. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୪. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୫. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୬. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୭. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୮. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୯. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 
୧୦. ଅନ୍ୟାନ୍ୟତା କରନ୍ତୁ 

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202
2018/12

16. ગ્રામિક સેવા બોર્ડ



17. સેવા પ્રાપ્તિ અને સેવા સમય

18. સેવા સમય



19. સેવા સમય



20. સેવા સમય



21. સેવા સમય



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2018/12

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୩୧ ବିଜୟା ଚତୁର୍ଥୀ



୩୨ ବିଜୟା ବାହାଡ଼

ଜାତୀୟ ସ୍ୱାଧୀନତା ଦିବସ

୩୩ ସମ୍ବିଧାନ ଦିବସ



୩୪ ଶ୍ରମ ଦିବସ

ଆନ୍ତର୍ଜାତୀୟ ଶ୍ରମ ଦିବସ

୩୫ ଶ୍ରମ ଦିବସ



୩୬ ବିଜୟା ଚତୁର୍ଥୀ

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୩୭ ଶ୍ରମ ଦିବସ

ଜାତୀୟ ଶ୍ରମ ଦିବସ

୩୮ ପ୍ରତିଷ୍ଠା ଦିବସ

ପ୍ରତିଷ୍ଠା ଦିବସ

୩୯ ଶ୍ରମ ଦିବସ



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ଜାତୀୟ ସ୍ୱାଧୀନତା ଦିବସ

୪୩ ଶ୍ରମ ଦିବସ



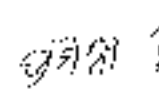
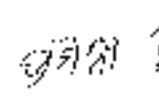
୪୪ ଶ୍ରମ ଦିବସ

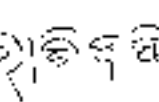
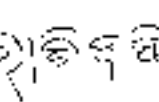


ଶ୍ରମ ଦିବସ



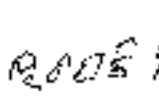
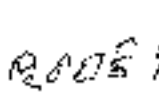
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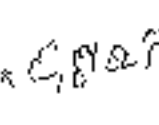
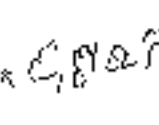
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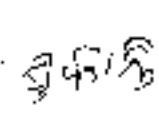
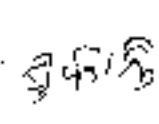
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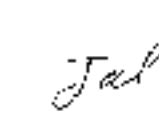
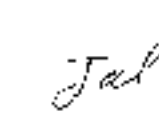
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5/12

1. ગામડાંનું નામ

Gaganendra Gamaraj

2. વસતી ક્રમ

સા. રૂ. 1 લેવા કા

3. ઉત્તર ક્રમ



4. સરકારી નામ



5. સરકારી નામ



Sarapanch
Bhairabnada G.P.
સા. રૂ. 1

સરકારી નામ

સરકારી નામ

20-12-16

Municipal Corporation
Municipal Corporation

20-12-16
CAPTAIN

સરકારી નામ

20/12/2016
MUNICIPAL SECTION

Revenue Supervisor
Municipal

સરકારી નામ

Counter Signed

સરકારી નામ

સરકારી નામ
સરકારી નામ
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৬) গুণিতক সূত্রঃ

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602190 Sarabanch
Bhairabagada G.P.

১৯৭৯ খ্রিঃ ১০/১১/৭৯

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ॐ नमो भगवते वासुदेवाय

443

Sarapanah
Rhairabagada G.P.

ସୂଚକ ଶ୍ରମିକଙ୍କ ସଂଖ୍ୟା ୮ କାର୍ଯ୍ୟକାରୀ ହୋଇଥିବା ସମ୍ବନ୍ଧରେ

ଶ୍ରମିକ ଶ୍ରମିକଙ୍କ ସଂଖ୍ୟା ୮ କାର୍ଯ୍ୟକାରୀ ହୋଇଥିବା ସମ୍ବନ୍ଧରେ

ସାବିତ୍ରୀ ଶ୍ରମିକ

ସାବିତ୍ରୀ ଶ୍ରମିକ

ସାବିତ୍ରୀ

୩. ୨୫. ୧୧. ୨୦୧୫

Sarepanch
Bhairabagada G.P.

ସାବିତ୍ରୀ ଶ୍ରମିକ ୦୪

ଶ୍ରମିକ ଶ୍ରମିକଙ୍କ ସଂଖ୍ୟା ୮ କାର୍ଯ୍ୟକାରୀ ହୋଇଥିବା ସମ୍ବନ୍ଧରେ

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ଶ୍ରମିକ ଶ୍ରମିକଙ୍କ ସଂଖ୍ୟା ୮ କାର୍ଯ୍ୟକାରୀ ହୋଇଥିବା ସମ୍ବନ୍ଧରେ

ସାବିତ୍ରୀ ଶ୍ରମିକ

ସାବିତ୍ରୀ

Sarepanch
Bhairabagada G.P.

ସାବିତ୍ରୀ

୨୫-୧୧-୧୫

Office Extension Officer
Bhairabagada Dist. Rayagada

(M)

-20-

Annexure - 1

(1)

ENGLISH VERSION SPECIAL GRAMSABHA.

VILLAGE: BAINIBASA.

DATE: 20.12.2016

TIME: 10.00 A.M.

PLACE: INFRONT OF ANGANBADI CENTRE.

MEMBERS PRESENT.

GOVT. OFFICIALS.

1. Welfare extension Officer, Muniguda, Dist. Rayagada.
2. Gram panchayat Officer, Muniguda, Dist. Rayagada.
3. Forester, Muniguda, Dist. Rayagada.
4. Revenue Supervisor, Muniguda Dist. Rayagada.

Sd/- with Seal.

Sd/- with Seal.

Sd/- with Seal.

Sd/- with Seal.

VILLAGERS.

1. Jakesika Dammba.

Sd/-

2. Sikaka Budra.

Sd/-

3. Kantamala sakru.

Sd/-

4. Saihari Kandamoka.

Sd/-

5. Anitoi Dangori.

Sd/-

6. Kusulia Patu.

Sd/-

7. Dama Kuhulia.

Sd/-

8. Kusulia Hajina.

Sd/-

9. Sangita Tukri.

Sd/-

10. Chamsajani.

Sd/-

11. Jakesika parvati.

Sd/-

12. Sikaka Ramchandro.

Sd/-

13. Saonta Kandomala.

Sd/-

English version
of Gram Sabha

20.12.2016
Muniguda

(Signature)

-21-

② 133

(3)

14. Sikaka Laxman.

Sd/

15. Arjun Dongari.

Sd/-

16. Guru buda kuslya.

Sd/

17. Ranjit Kusulya.

Sd/-

18. Palke pust.

Sd/-

19. Tejeani Kondabari.

Sd/-

20. Agsti kuslya.

Sd/-

21. Sikaka banol.

Sd/

22. Rahabazi Sikaka.

Sd/-

23. Amula Kandamaka.

Sd/

24. Kusulya jimbubati.

Sd/-

25. kusulya chndra.

Sd/-

26. Subita Kusulya.

Sd/-

27. Palke susilo.

Sd/-

28. Madhu Kandapani.

Sd/-

29. Kusulya lechna.

Sd/

30. Uday Sahoo.

Sd/-

31. Ninti kekestika.

Sd/-

32. sikukapalfai.

Sd/-

33. Promod Sikaka.

Sd/-

34. Sikaka dipa

Sd/-

35. Nira Sikaka.

Sd/-

36. Sikakanuly.

Sd/-

37. Iarai Sikaka.

Sd/-

For the purpose of the...

...

(4)

(3)

38. Ambudi Saraka.
39. Anta kadraka
40. Paika kakasika.
41. Sikoku lachindra.
42. Jagannath Sikaka.
43. Prahalad Sikaka.
44. Bhagya Sikaka.
45. Kumbhoxumuraka.
47. Laxmi Sikaka.
48. Sikaka Rajesh.
49. Chakesika ratant.
50. Kadraka Juddhisti.
51. Sikaka lami.
52. rajih Sikaka.
53. Santi Sikaka.
54. Sikaka bunai.
55. Lachhpati Sikaka.
56. Sarala Dashrathi.
57. Kuthika Singari.
58. Sukanti Kadraka.
59. Kes'ia padma
60. Jalandhar Sikaka.
61. Kara Gomango.
62. Ahalya Sikaka

Sd/-

Sd/-

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10/10/2020

10/10/2020

10/10/2020

53 Gajendra Goringo.

64. Jamuna Sikā'z.

65.2a and her Sikkaka.

65. Saúl Gómez.

S/.Laxman Garadia.

Subj-

5x1j

5d/-

 $\leq 13, 17, 19$

544-

Sd/-

Sikaka R:nab'ati

SAPPANCHI
BHAIRABGADE G.P.

Welfare Extension
Municipals, L.

A special Gramsabha of Bainibasa village was arranged to day at 10.00 A.M. today, i.e. 20.12.2016. Smt. Ratnabati Sikka, Sarpanch of Bhairabgad Grampanchayat presided over the meeting. 67(Sixty seven) adult persons of the village out of total 97 (Ninty seven) attended the meeting which is more than 70% of the total strength. At the beginning of the meeting, the president welcomed all the participants. The following proposals have been taken, based on the discussion held as per agenda.

Proposal No.1

It was unanimously proposed to convert the following forest land to non-forest land for mining purposes.

| Mouza | Khata No. | Plot No. | Area in Ac. | Kissam | Revised Kissam | Remark |
|--------------|-----------|----------|-------------------|--------------|----------------|--------|
| Bainibasa | 18 | 125 | 1.93 | Sada Jungle | Non forest | Part. |
| Bainibasa | 16 | 22 | 0.10 | Patra Jungle | Non forest | Part. |
| Bainibasa | 10 | 49 | 29.43 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 51 | 46.57 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 57 | 3.11 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 59 | 2.40 | Patra Jungle | Non forest | Part. |
| Bainibasa | 10 | 64 | 5.57 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 111 | 6.52 | Patra Jungle | Non forest | Part. |
| Bainibasa | 16 | 123 | 16.19 | Patra Jungle | Non forest | Part. |
| TOTAL | | | 108.82 Ac. | | | |

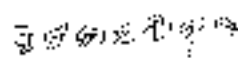
Total 108.82 Ac forest land proposed to be converted to non-forest land

Proposal No.2

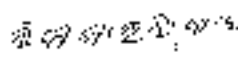
No schedule tribe or other traditional forest dwellers have been allotted with the land proposed for conversions in proposal No.1 above vide forest land Act 2006 for either personal or community purpose.

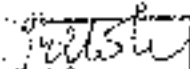
This has been discussed and approved by the forest right committee of Bainibasa Village in the meeting held on 19.12.2016.

At the end of the meeting the president thanked all the members present in the meeting. Finally, today's meeting was concluded by extending vote of thanks to the president.


Sarpanch
Bhairabgad G.P.

Copy to Collector, Rayagada/Sub-Collector, Gunupur, BDO, Muniguda.
Copy submitted to The P.A./TDA(Nodal) Rayagada with reference to his letter no.5285/XI-47/2016, dt.26.11.2016 for kind information and necessary action.


SARPANCH


Sarpanch
Muniguda G.P.

ସଂସାର ସ୍ୱର୍ଗରେ ଯିବାକୁ ୧ ବ୍ୟକ୍ତିଙ୍କୁ ଯାହା ସ୍ୱର୍ଗକୁ ଯାଏ
ତାହା ହେଉଛି ସଂସାର ସ୍ୱର୍ଗକୁ ଯିବାକୁ ଯିବାକୁ ଯିବାକୁ

ସାମାଜିକ ସ୍ୱର୍ଗ

ସାମାଜିକ ସ୍ୱର୍ଗ

ସାମାଜିକ

25.11.2025

Sarapanch
Bhairabagada GP

ସାମାଜିକ ସ୍ୱର୍ଗ

ସଂସାର ସ୍ୱର୍ଗରେ ଯିବାକୁ ଯିବାକୁ ଯିବାକୁ / ସ୍ୱର୍ଗକୁ ଯିବାକୁ
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ସଂସାର ସ୍ୱର୍ଗରେ ଯିବାକୁ ଯିବାକୁ ଯିବାକୁ / ସ୍ୱର୍ଗକୁ ଯିବାକୁ
ସଂସାର ସ୍ୱର୍ଗରେ ଯିବାକୁ ଯିବାକୁ ଯିବାକୁ / ସ୍ୱର୍ଗକୁ ଯିବାକୁ

ସାମାଜିକ ସ୍ୱର୍ଗ

Sarapanch
Bhairabagada GP

Prabhu

26-11-16

Welfare Extension Office,
Muniguda, Dist-Rayagada

**MEETING OF THE SUB-DIVISIONAL LEVEL COMMITTEE MEETING OF
GURUPUR SABHA GRUHA (SGLC) HELD ON 11.07.2017 ON IMPLEMENTATION OF
HINDU RELIGIOUS AND OTHER TRADITIONAL FOREST DWELLERS ACT, 2006
AND AMENDMENT RULE 2012.**

Date: 11.07.2017
Time: 3.30 PM

at: Sadashabha Sabha Gruha, Sub-Collectors Office, Gurupur.

The Sub-Divisional Committee meeting (SDLC) on implementation of Scheduled Caste and Other Traditional Forest Dwellers Act 2006 and Amendment Rule 2012 was held on 11.07.2017 at 3.30 PM in the Sadashabha Sabha Gruha of the Sub Collector, Gurupur under the chairmanship of the sub-collector, Gurupur.

The following members/ officers and officials attended the meeting is annexed at the end of the report.

At the outset, the Sub Collector, Gurupur (SGLC) Gurupur welcomed to all members present in the meeting and initiated the discussion.

The Assistant District Welfare Officer, Gurupur-Terni-Venaher convened, Sub-Divisional Committee advises regarding status of claims received by the SDLC from different SCs/STs/other tribes in detail and read the list of claimants in village, ST and Tehsil wise for approval of all members. 1808 nos of individual claims received from 77 named tribes/tribes were placed before the SDLC today. These 1808 nos of claims were thoroughly discussed and decided and placed before the SDLC for approval.

Agenda No-01:

1. List of individual cases approved in SDLC, Gurupur on 11.07.2017

| Sl. No. | Name of the Village | Name of the Tribe | No. of Claims approved | Area covered (Hectares) |
|---------|---------------------|-------------------|------------------------|-------------------------|
| 1 | Gurupur | Chandigarh | 13 | 53.18 |
| 2 | Gurupur | Chandigarh | 02 | 51.40 |
| 3 | Gurupur | Chandigarh | 14 | 17.30 |
| 4 | Gurupur | Chandigarh | 14 | 28.85 |
| 5 | Gurupur | Chandigarh | 02 | 35.34 |
| 6 | Gurupur | Chandigarh | 01 | 15.70 |
| 7 | Gurupur | Chandigarh | 01 | 15.70 |
| 8 | Gurupur | Chandigarh | 01 | 14.50 |
| 9 | Gurupur | Chandigarh | 01 | 3.40 |
| 10 | Gurupur | Chandigarh | 01 | 51.55 |
| 11 | Gurupur | Chandigarh | 18 | 25.31 |
| 12 | Gurupur | Chandigarh | 01 | 11.91 |
| 13 | Gurupur | Chandigarh | 01 | 11.91 |
| 14 | Gurupur | Chandigarh | 01 | 11.91 |
| 15 | Gurupur | Chandigarh | 01 | 11.91 |
| 16 | Gurupur | Chandigarh | 01 | 11.91 |
| 17 | Gurupur | Chandigarh | 01 | 11.91 |
| 18 | Gurupur | Chandigarh | 01 | 11.91 |
| 19 | Gurupur | Chandigarh | 01 | 11.91 |
| 20 | Gurupur | Chandigarh | 01 | 11.91 |
| 21 | Gurupur | Chandigarh | 01 | 11.91 |
| 22 | Gurupur | Chandigarh | 01 | 11.91 |
| 23 | Gurupur | Chandigarh | 01 | 11.91 |
| 24 | Gurupur | Chandigarh | 01 | 11.91 |
| 25 | Gurupur | Chandigarh | 01 | 11.91 |
| 26 | Gurupur | Chandigarh | 01 | 11.91 |
| 27 | Gurupur | Chandigarh | 01 | 11.91 |
| 28 | Gurupur | Chandigarh | 01 | 11.91 |
| 29 | Gurupur | Chandigarh | 01 | 11.91 |
| 30 | Gurupur | Chandigarh | 01 | 11.91 |
| 31 | Gurupur | Chandigarh | 01 | 11.91 |
| 32 | Gurupur | Chandigarh | 01 | 11.91 |
| 33 | Gurupur | Chandigarh | 01 | 11.91 |
| 34 | Gurupur | Chandigarh | 01 | 11.91 |
| 35 | Gurupur | Chandigarh | 01 | 11.91 |
| 36 | Gurupur | Chandigarh | 01 | 11.91 |
| 37 | Gurupur | Chandigarh | 01 | 11.91 |
| 38 | Gurupur | Chandigarh | 01 | 11.91 |
| 39 | Gurupur | Chandigarh | 01 | 11.91 |
| 40 | Gurupur | Chandigarh | 01 | 11.91 |
| 41 | Gurupur | Chandigarh | 01 | 11.91 |
| 42 | Gurupur | Chandigarh | 01 | 11.91 |
| 43 | Gurupur | Chandigarh | 01 | 11.91 |
| 44 | Gurupur | Chandigarh | 01 | 11.91 |
| 45 | Gurupur | Chandigarh | 01 | 11.91 |
| 46 | Gurupur | Chandigarh | 01 | 11.91 |
| 47 | Gurupur | Chandigarh | 01 | 11.91 |
| 48 | Gurupur | Chandigarh | 01 | 11.91 |
| 49 | Gurupur | Chandigarh | 01 | 11.91 |
| 50 | Gurupur | Chandigarh | 01 | 11.91 |
| 51 | Gurupur | Chandigarh | 01 | 11.91 |
| 52 | Gurupur | Chandigarh | 01 | 11.91 |
| 53 | Gurupur | Chandigarh | 01 | 11.91 |
| 54 | Gurupur | Chandigarh | 01 | 11.91 |
| 55 | Gurupur | Chandigarh | 01 | 11.91 |
| 56 | Gurupur | Chandigarh | 01 | 11.91 |
| 57 | Gurupur | Chandigarh | 01 | 11.91 |
| 58 | Gurupur | Chandigarh | 01 | 11.91 |
| 59 | Gurupur | Chandigarh | 01 | 11.91 |
| 60 | Gurupur | Chandigarh | 01 | 11.91 |
| 61 | Gurupur | Chandigarh | 01 | 11.91 |
| 62 | Gurupur | Chandigarh | 01 | 11.91 |
| 63 | Gurupur | Chandigarh | 01 | 11.91 |
| 64 | Gurupur | Chandigarh | 01 | 11.91 |
| 65 | Gurupur | Chandigarh | 01 | 11.91 |
| 66 | Gurupur | Chandigarh | 01 | 11.91 |
| 67 | Gurupur | Chandigarh | 01 | 11.91 |
| 68 | Gurupur | Chandigarh | 01 | 11.91 |
| 69 | Gurupur | Chandigarh | 01 | 11.91 |
| 70 | Gurupur | Chandigarh | 01 | 11.91 |
| 71 | Gurupur | Chandigarh | 01 | 11.91 |
| 72 | Gurupur | Chandigarh | 01 | 11.91 |
| 73 | Gurupur | Chandigarh | 01 | 11.91 |
| 74 | Gurupur | Chandigarh | 01 | 11.91 |
| 75 | Gurupur | Chandigarh | 01 | 11.91 |
| 76 | Gurupur | Chandigarh | 01 | 11.91 |
| 77 | Gurupur | Chandigarh | 01 | 11.91 |

Special Officer
I.T.O.A. Rayagad

| | | | | | |
|----------------|-----|------------------|----------------|-----|--------|
| Jendri | 20 | Uluksara | Khariguda | 77 | 1.60 |
| | 21 | Karayapadar | Khariguda | 44 | 72.00 |
| | 22 | Kagama | Kadama | 65 | 83.92 |
| | | TOTAL | | 163 | 207.52 |
| Basse moustack | 23 | Khariguda | Chandraguda | 10 | 16.33 |
| | 24 | Lakshatuta | Dulani | 1 | 2.50 |
| | 25 | Badama takaholi | Chaturang | 5 | 22.58 |
| | 26 | Nagapadar | Nagapadi | 27 | 29.43 |
| | 27 | Kharigamatta | Bathipada | 7 | 11.32 |
| | 28 | Lani | Kumbharthamani | 4 | 4.98 |
| | 29 | Karunaguda | Karunadong | 30 | 23.52 |
| | | TOTAL | | 83 | 109.48 |
| Kumharaguda | 30 | Pamiraganod | Kandharanani | 45 | 16.55 |
| | 31 | Dharakundi | G. Jumar | 7 | 12.45 |
| | 32 | Jhara gudu | Pattai | 19 | 4.60 |
| | 33 | Dakamantpu | Sir. Jhal | 7 | 10.77 |
| | 34 | Saravangula | G. K. K. K. | 28 | 2.81 |
| | 35 | Tadling | Karaku | 40 | 28.63 |
| | 36 | K. K. K. K. | K. K. K. K. | 20 | 50.77 |
| | 37 | K. K. K. K. | K. K. K. K. | 32 | 17.58 |
| | | TOTAL | | 208 | 114.57 |
| Kumhariguda | 38 | Karadagapadar | Telangapadar | 67 | 150.00 |
| | 39 | Warkhe | Telangapadar | 48 | 49.00 |
| | 40 | Budagudi | Saradhapur | 6 | 15.00 |
| | 41 | Telangapadar | Telangapadar | 58 | 13.00 |
| | 42 | Kandharagatigude | Maniguda | 9 | 9.50 |
| | 43 | Pamiranda | Shibapadar | 38 | 48.90 |
| | 44 | Dakharud | Kandharabali | 1 | 1.75 |
| | 45 | Kandharani | Telangapadar | 45 | 51.20 |
| | 46 | Kharigabadi | Shibapadar | 34 | 22.35 |
| | 47 | Kharigapadar | Telangapadar | 7 | 15.30 |
| | 48 | Kharigapadar | Telangapadar | 62 | 3.20 |
| | 49 | Karandhara | Kumharabali | 52 | 40.00 |
| | 50 | Kujanga | Saradhapur | 26 | 53.70 |
| | 51 | Dubagudi | Kandharabali | 13 | 15.00 |
| | 52 | Telangabadi | Saradhapur | 13 | 15.01 |
| | 53 | Kumharabali | Kumharabali | 11 | 12.00 |
| | | | | 471 | 550.24 |
| Kumharabadi | 54 | Madagudi | Kumharabadi | 45 | 21.30 |
| | 55 | Kumharabadi | Kumharabadi | 24 | 60.50 |
| | 56 | Kumharabadi | Kumharabadi | 11 | 30.89 |
| | 57 | Kumharabadi | Kumharabadi | 24 | 17.00 |
| | 58 | Kumharabadi | Kumharabadi | 21 | 60.00 |
| | 59 | Kumharabadi | Kumharabadi | 17 | 50.90 |
| | 60 | Kumharabadi | Kumharabadi | 11 | 6.22 |
| | 61 | Kumharabadi | Kumharabadi | 20 | 28.70 |
| | 62 | Kumharabadi | Kumharabadi | 28 | 16.70 |
| | 63 | Kumharabadi | Kumharabadi | 15 | 1.70 |
| | 64 | Kumharabadi | Kumharabadi | 19 | 11.01 |
| | 65 | Kumharabadi | Kumharabadi | 10 | 71.50 |
| | 66 | Kumharabadi | Kumharabadi | | 1.00 |
| | 67 | Kumharabadi | Kumharabadi | | 1.00 |
| | 68 | Kumharabadi | Kumharabadi | | 1.00 |
| | 69 | Kumharabadi | Kumharabadi | | 1.00 |
| | 70 | Kumharabadi | Kumharabadi | | 1.00 |
| | 71 | Kumharabadi | Kumharabadi | | 1.00 |
| | 72 | Kumharabadi | Kumharabadi | | 1.00 |
| | 73 | Kumharabadi | Kumharabadi | | 1.00 |
| | 74 | Kumharabadi | Kumharabadi | | 1.00 |
| | 75 | Kumharabadi | Kumharabadi | | 1.00 |
| | 76 | Kumharabadi | Kumharabadi | | 1.00 |
| | 77 | Kumharabadi | Kumharabadi | | 1.00 |
| | 78 | Kumharabadi | Kumharabadi | | 1.00 |
| | 79 | Kumharabadi | Kumharabadi | | 1.00 |
| | 80 | Kumharabadi | Kumharabadi | | 1.00 |
| | 81 | Kumharabadi | Kumharabadi | | 1.00 |
| | 82 | Kumharabadi | Kumharabadi | | 1.00 |
| | 83 | Kumharabadi | Kumharabadi | | 1.00 |
| | 84 | Kumharabadi | Kumharabadi | | 1.00 |
| | 85 | Kumharabadi | Kumharabadi | | 1.00 |
| | 86 | Kumharabadi | Kumharabadi | | 1.00 |
| | 87 | Kumharabadi | Kumharabadi | | 1.00 |
| | 88 | Kumharabadi | Kumharabadi | | 1.00 |
| | 89 | Kumharabadi | Kumharabadi | | 1.00 |
| | 90 | Kumharabadi | Kumharabadi | | 1.00 |
| | 91 | Kumharabadi | Kumharabadi | | 1.00 |
| | 92 | Kumharabadi | Kumharabadi | | 1.00 |
| | 93 | Kumharabadi | Kumharabadi | | 1.00 |
| | 94 | Kumharabadi | Kumharabadi | | 1.00 |
| | 95 | Kumharabadi | Kumharabadi | | 1.00 |
| | 96 | Kumharabadi | Kumharabadi | | 1.00 |
| | 97 | Kumharabadi | Kumharabadi | | 1.00 |
| | 98 | Kumharabadi | Kumharabadi | | 1.00 |
| | 99 | Kumharabadi | Kumharabadi | | 1.00 |
| | 100 | Kumharabadi | Kumharabadi | | 1.00 |

Special Officer
T.O.A. Rayagade

| | | | | | |
|---------------------------|------------|-------------|--|-----|--------|
| | | 3-29 | | 10 | 80.00 |
| 71 | Timbaguda | 1st Maripur | | 18 | 36.90 |
| 72 | Kaogunda | 1st Maripur | | 19 | 25.50 |
| 73 | Kalagudi | 2nd Maripur | | 100 | 753.20 |
| | | TOTAL | | 137 | 815.60 |
| 74 | Szengunda | 1st Maripur | | 13 | 18.50 |
| 75 | Maharajpur | 1st Maripur | | 12 | 25.50 |
| | | TOTAL | | 25 | 44.00 |
| | | Grand TOTAL | | 162 | 859.60 |
| Request Resources Rights. | | | | | |

Approval of Community Rights and Community Forest Resources Rights

32 number of Community Forest right claims & Community Forest Resource Right cases received from different Commissions of Garoipur and Gadar Bherky/Tahsil were so placed before NCRC for approval.

The Rights claimed by the Gramsabhas under community right and CR Right were
discussed in the meeting in detail along with customary tenancy of each district
irrespective one by one.

It is revealed from the CR/DR records received from the Gramsabhas that the field representatives at Revenue, Forest and other related departments were not present during the verification, inspite of sufficient notice well in advance, with a request to attend the verification.

Hence, the SMLC, after verifying the recorded evidence available in the concerned case records approved above claims and resolved to submit same to the DLC for conferment of Right as mentioned in 12 (1) of the FRA, relating to process of recognition of Rights. The detail of community rights and community resource right claims received by SMLC was discussed in the SMLC as mentioned below.

| No. | Name of the Forest Right Committee villages | Village or GR | Block/Taluk # | Traditional Boundary of the Forest Land Applied for Community Rights & Community Forest Resources Rights |
|-----|---|---------------|---------------|--|
| 01 | Tangan | Tangan | Gurupur | N: Kukuliba Jangal, Kusumabadar Parvat
S: Engathir Village, Kandharla Parvat
E: Munda Village
W: Kukuliba Jangal, Bedasi Jangal |
| 02 | Gundambara | Pattasing | Gurupur | N: Bagadesing Parvat, Jachatal Pahad
S: Jandar Jangal, Kutampal Pahad
E: Kulkathasingh Parvat, Dadior Parat
W: Kuratal, Saiwasi Pahad |
| 03 | Bareil | Pattasing | Curepur | N: Nenengatal Parat, Arangtar Pahad
S: Tanaykuratal Pahad,
Guntaharata
W: Garogaling Pahad, Kumadinakatangal Dandior |
| 04 | Munda | Tangan | Curepur | N: Mangihor Pahad, Bapahu Parvat
E: Kuchibu Parvat, Leabhor Parvat
S: Resibai Basti, Kogimbui
W: Gusimoina, Gadhya |

Special Officer
T.D.A. Rayan

| No | Desa | Kecamatan | Kelompok | Daftar Pemilik Tanah |
|----|------------|-------------|-----------|---|
| 06 | Hirjeng | Limau | Gunapur | M. Nenggi Pahad, Dengadon Pahad
S. Antel Kiro
E. S. Kital Pahad |
| 07 | Kirung | Torone | Gunapur | M. Marjuki Pahad
N. R. K. Pahad, Gecu Pahad
E. R. K. Pahad, S. R. K. Pahad
W. D. K. Pahad |
| 08 | Lode | P. U. K. K. | Gunapur | N. L. K. Pahad
S. S. R. K. Pahad (Burial Ground)
E. K. R. K. Pahad |
| 09 | Malapadjar | Bhimpur | Gunapur | M. R. K. Pahad, R. K. Pahad
N. M. K. Pahad, P. K. Pahad
S. M. K. Pahad
E. M. K. Pahad, S. K. Pahad
W. M. K. Pahad |
| 10 | Sengipadar | T. K. K. | Gunapur | N. R. K. Pahad
S. R. K. Pahad, R. K. Pahad
E. R. K. Pahad
W. R. K. Pahad |
| 11 | Aukreli | Limau | Gunapur | N. J. K. Pahad, D. K. Pahad
S. K. K. Pahad
E. K. K. Pahad |
| 12 | Tungging | Limau | Gunapur | M. K. K. Pahad
N. K. K. Pahad, L. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, T. K. Pahad
W. K. K. Pahad |
| 13 | Bhimpur | Bhimpur | Gunapur | N. M. K. Pahad
S. B. K. Pahad
E. K. K. Pahad
W. K. K. Pahad |
| 14 | Sengipadar | Bhimpur | Pendaguan | M. P. K. Pahad, T. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, K. K. Pahad
W. K. K. Pahad |
| 15 | Tungging | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |
| 16 | Sengipadar | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |
| 17 | Sengipadar | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |
| 18 | Sengipadar | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |
| 19 | Sengipadar | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |
| 20 | Sengipadar | Bhimpur | Gunapur | N. K. K. Pahad
S. K. K. Pahad
E. K. K. Pahad, D. K. Pahad
W. K. K. Pahad, S. K. Pahad |

| | | | | |
|---|-----------|-----------|--------|--|
| 1 | Sahibganj | Garughat | Gudari | N: Langada Village, Biseri, Jom Kradakur, B
Parangudal
S: Kradakur Village
E: Matamania Jangal
W: Kandhuti Dongor
N: Sambardandi, Cpo, Andajhor Dongor
S: Sipraguda Village, Cuzur, Kipudobhuru Jangal
E: Dauli Dongor (Jom)
W: Hemaduki Bury Jangal |
| 2 | Kandakuti | Kandakuti | Gudari | N: Gopodopadar Village, Guduke Dongor
S: Jom Khatia Village, Eya Dongor
E: Pandi Village, Gnad Dongor
W: Gopodopadar Village, Hesthigara Jangal
W: Khatia Village, Jom |
| 3 | Panchpani | Sorapendi | Gudari | S: Jangal Block
E: Sambardandi Village, Kalerchadu Dongor
W: Bauruli Village, Adamach Jangal
V: Bauruli Village, Karambar Jangal |
| 4 | Kandakuti | Kandakuti | Gudari | S: Gauda Dhonakuti Village
E: Khatia Village, Regolud Pochad
W: Khatia Village, Alpur Jangal
N: Sanardhola Village, Sudabur Pochad
S: Arjaguda Village, Alabur Pochad
E: Parabur Pochad
W: Dugulapada Village, Arabur Pochad
N: Garubur Pochad
S: Khatia Jangal
E: Khatia Jangal
W: Garubur Pochad |
| 5 | Sorapendi | Sorapendi | Gudari | |

Participating in the discussion, the Forest Range Officer, Ceper suggested for utilizing GPS technology while demarcating the boundaries for each name, which will be helpful for accurate delineation of land. It was resolved that the Forest Personnel, who are trained with GPS technology of survey will remain present in the site verification exercises, with GPS machine.

Schedule 2:

Process of constitution of Forest Rights committees in different villages as per FRA Amendment Rule, 2013.

The following table indicates the progress on Constitution/Re-constitution of Forest Rights Committees in different villages of this Sub-Division.

| Sl. No. | Name of the Block/Taashil | No. of Villages in Block | No. of Villages constituted/Re-constituted | Remarks |
|---------|---------------------------|--------------------------|--|---------|
| 1 | Garughat | 13 | 12 | |
| 2 | Kandakuti | 12 | 12 | |
| 3 | Panchpani | 12 | 12 | |
| 4 | Kandakuti | 12 | 12 | |
| 5 | Sorapendi | 12 | 12 | |
| 6 | Sorapendi | 12 | 12 | |
| 7 | Sorapendi | 12 | 12 | |
| 8 | Sorapendi | 12 | 12 | |
| 9 | Sorapendi | 12 | 12 | |
| 10 | Sorapendi | 12 | 12 | |
| 11 | Sorapendi | 12 | 12 | |
| 12 | Sorapendi | 12 | 12 | |
| 13 | Sorapendi | 12 | 12 | |
| 14 | Sorapendi | 12 | 12 | |
| 15 | Sorapendi | 12 | 12 | |
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Special Officer
L.T.D.A. Ravagad

-42-

The Sub-Collector-Cum Chairman, S.O.C., Guntur expressed his deep dissatisfaction over the non formation of FRC in all villages in tal. In this respect the performance of WEO, Bhanaguda Block and Gadari Block was very poor. The WEOs of both the Blocks are more or less instructed to complete the FRC work without further delay. All WEOs were also requested to submit reconstitution report (Gramasabha proceedings) both in hard and soft copies for taking further action.

Agenda No-9A:

Preparation of project proposals under FRA convergence plan for all Title holders as per guideline envisaged in the (No 7087 dated 3rd April 2016 of the SSO Department).

A detail discussion on the guidelines for effective implementation of convergence programme for Forest Right holders under FRA, 2006 was held in the meeting on 29.06.2016 at Rayagada on the chairmanship of the Collector, Rayagada. In the said meeting the Collector, Rayagada had impressed to take up survey work vertically (Not horizontally) and to complete the survey work on or before 15.08.2016. The Collector Cum Chairman also instructed the officers to extend all Government-related schemes like Land Development, Land Productivity, Hemachand, Basic amenities and other livelihood measures for individual and community Title holders of FRA. For this, as per govt. guidelines a model programme for survey was also devised. In case of IFI Title holders, plot wise planning shall be made by the field functionaries i.e. WEO, Project Manager, Subject Matter Specialist, and the Deptt. Officials etc. in consultation with the Title holders and FRC. But till date survey work under convergence scheme is not completed in all Block except Pampur.

The Sub-Collector-Cum Chairman instructed all WEOs to complete the survey work soon and submit the survey report to the District Nodal Officer, FRA, Rayagada with a copy (hard and soft) to the S.O.C. on or before 15.7.2017.

Agenda No-9B:

Diversion proposal of A.C.103.62 or 44.63314c. of forest land for non forest purpose of village Rainibasa under Bhairabguda GP of Bhanaguda Block.

It was discussed in the meeting regarding diversion proposal of A.C.103.62, 44.63314c. of forest land for non forest purpose of village Rainibasa under Bhairabguda GP of Bhanaguda Block. The Project Administrator-Cum-Nodal Officer, FRA (FRA Rayagada) letter No. 5226, dated 26.12.2016 has informed that M/S Pradip Industries, Telangabazar, Guntur has applied for diversion of Forest Land to an extent of 60.46 (44.63314c.) coming under M. area of Rainibasa Grama panchayat of M/S Pradip Industries at Rainibasa under Bhanaguda Taluk. The FRC of Rainibasa village held on 17.12.2016 and special Gramasabha meeting held on 29.12.2016 under the chairmanship of Sri Anandachandra Sikarla, FRC President unanimously resolved to convert the Kisan of said forest land to non forest purpose. The Land Scheduled as given below.

Special Officer
T.O.A. Rayagada

2/2/77 DW. CA/LS:

| Village | Khata No. | Plot No. | Area in Acre | Reason | Divided
Khasam | Remarks |
|----------|-----------|----------|--------------|--------|-------------------|---------|
| Baindara | 18 | 125 | 1.63 | B.J. | Non Forest | Part |
| | 16 | 77 | 0.10 | P.J. | Non Forest | Part |
| | 16 | 49 | 25.53 | P.J. | Non Forest | Part |
| | 16 | 57 | 46.57 | P.J. | Non Forest | Part |
| | 16 | 57 | 0.11 | P.J. | Non Forest | Part |
| | 16 | 59 | 2.40 | P.J. | Non Forest | Part |
| | 16 | 64 | 5.57 | P.J. | Non Forest | Part |
| | 15 | 111 | 5.57 | P.J. | Non Forest | Part |
| | 16 | 124 | 16.19 | P.J. | Non Forest | Part |
| | 16 | 124 | 16.19 | P.J. | Non Forest | Part |
| TOTAL: | | | 108.04 Ac. | | | |

Hence, as approved by the Gramasabha, the SDLC resolved to submit this diversion of forest to D.F. Rayagada for taking necessary approval for diversion.

Agenda No-05:

Stems of convergence scheme provided to FRA Title holders in different longline welfare schemes of Govt.

The Sub-Collector expressed his displeasure on non submission of monthly report by the WEDs of monthly report on status of convergence scheme/benefits extended to FRA title holder in different welfare Govt. sponsored welfare scheme like housing, education, health care, electricity, land revenue waiver program etc. of ICDA, CDFP, etc. which are providing basic amenities and livelihood support. The WEDs are once again instructed to submit this MPR faithfully henceforth, relating to FRA land holders covered under above schemes.

Agenda No-06:

Correction of title and maps of the FRA Title holders by the Tahasildars.

The information on progress of correction of ROs and Maps of the Title holders under FRA yet to be received from the Tahasildars, although copies of Titles and Sketch Maps provided to them by the Project Administrator, UDA-Cum-District Social Officer, Rayagada. All Tahasildars are once again impressed upon to complete the said work in the shortest possible time and report on the progress in this regard to senior the same in the higher quarters.

Agenda No-07:

Identification and conversion of forest villages, Old habitations, unsurveyed villages, etc. to Revenue villages under Section 3(1)(b) of the SF & CRPD, Forest Right Act, 2001.

The Sub-Collector-Cum-Chairman SDLC present to all Tahasildars, Forest Range Officers and WEDs to bring to the notice of forest villages, and habitations, unsurveyed villages, etc. under their jurisdiction in order to take steps to convert these into Revenue villages. The conversion of the forest villages into revenue villages would enable the Government to extend all the developmental facilities to these villages and the convenience of this village would be entitled to all the benefits of the development programmes and subsidies of the Government.

Special Officer
T.D.A., Rayagada

Other matters:

The SDC expressed concern over the fact that some of the field functionaries are not attending the site verification of FRA claims, on the date of field verification though they were intimated well in advance by Gramasabhas. Hence all the field functionaries related to land verification under Forest Right Act i.e. R.L WFO and Forest Personnel were instructed to attend the verification site henceforth without fail.

The SDLC also shared concerns regarding incomplete claims received from Gramasabhas which is delaying the processing of claims. In this regard capacity building and awareness generation of the members of FRD is important. The WEOs should ensure

The meeting ended with votes of thanks to the chair and members.

Sub-Collector - Cum - Chairman

by SDC, 23A, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855,

Date: 11/17/2017

Signature 2345 12017

Copy submitted to the Colleague-Jury-Chairman, M.C. Magistrate for favour of and information.

Web-Collector-Crm California

U.S. Dept. of Justice, FBI, Computer

Date: 21/7/20

Admission: \$350 / 2017

Copy forwarded to the Project Administrator - Coal District Model G. H. ...
Administrator, ITDA, Government of India for further information.

Sub-Collector: Com-Chau man.

9-SDLC, FRA, Groupware

Date: 12-7-17

Accepted: 22.5.2017

Copy forwarded to the Asst. Conservator of Forest, Gujapur Sub Division, Rayachoti/
Smt. Shanti Jagtap, Chairperson, Gudari Block/ Sri. Ravesh Chandir Palaka, V. Co. Chairman,
Bissamurthi Block/ Sri. Angada Saba, P.S. Member, Gujapur for information and necessary action.

Sub-Collector-Cum-Commissioner

Intellectual Property, Copyright, and Trademark

Date: 12/1/15

Memorandum 3352-17017

Copy to all Block Development Officers/All Headquarters of this Sub-Division for information and necessary action.

Sub Collector C. M. Chapman

7/501.C, 38A, Cooper

Date: 12.7.15

11/11/2017 12:24:17

Copy to the Saravathi, Chaitanya CP/President FRG, Saravathi under 1000. 2000
 Information
 Special Officer
 T.O.A. Rayanada

8. *Collector (in parentheses)*

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ANNEXURE-A

9-35

Members present in the FRA SDLC meeting held on 11.07.2019 at 3.30 PM

1. Sri Basanta Kumar Sahoo, OAS-I (SR), Sub-Collector Cum Chairman, SDLC.
2. Sri Sharan Chaitanya Sahoo, OAS-I (SR) Member, Luvamur, SDLC, Gunupur
3. Sri Lashanti Jagannatha, Chairperson, Gulari Block, Member
4. Sri Ramesh Chandra Patra, Vice Chairman, Cutack Block, Member
5. Sri Angada Sahoo, Sr. Jt. Member, Gunupur Block, Member
6. Sri Ashok Kumar Pradhan, Forest Range Officer, Gunupur
(On behalf of ACF, Gunupur Sub Division), Member
7. Sri Chandrabhanu Nag, Addl. Tahasildar, Romaniguda
8. Sri Ishmail Bhanu Nag, Addl. Tahasildar, Muniguda
9. Sri Trilok Choudhary, Addl. Tahasildar, Padampur
10. Sri Jagdish Chandra Barik, W.E.O., Gunupur
11. Sri Jayaraj Choudhary, W.E.O., Romaniguda
12. Sri Bhagathi Sahu, W.E.O., Muniguda
13. Sri Dushmanti Prasad, W.E.O., Bisanidcutack
14. Sri Ananta Rao, W.E.O., Padampur
15. Sri Hardeep Kumar Sahoo, W.E.O., Gulari
16. Sri Pradyuman, W.E.O., Choudhary
17. Sri Bhaskar Sahoo, W.E.O., Cutack
18. Sri Subodh Sahoo, W.E.O., Romaniguda
19. Sri Radhadas Sahu, Rev. Supervisor, Gunupur
20. Sri Rudraswara Sahoo, Rev. Supervisor, Gulari
21. Sri Saradchandra Anand, Bt, Ambada
22. Sri Ramesh Chandra Tripathy, Rev. Supervisor
23. Sri Manoj Prasad Saha, Bt, Akhasing
24. Sri S. Swatantra Saha, Bt, Jallia
25. Addl. S.O., Bt, Romaniguda
26. Rev. Inspector, Choudhary
27. Rev. Inspector, Gunupur
28. Rev. Inspector, Jagannatha
29. Rev. Inspector, Gunupur
30. Rev. Inspector, Gadikhal
31. Rev. Inspector, Titagar
32. Rev. Inspector, Sridhar Choudhary
33. Rev. Inspector, Janki
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100. Rev. Inspector, Janki

Special Officer
Romaniguda

**PROCEEDING OF THE DISTRICT LEVEL COMMITTEE
MEETING HELD ON 20-07-2017 ON IMPLEMENTATION OF
SCHEDULE TRIBE AND OTHER TRADITIONAL FOREST
DWELLERS ACT, 2006 AND AMENDMENT RULE, 2012**

Date of Meeting : 20-07-2017
Time : 5.00 P.M.
Venue : Sathbhairava Sabha Gruha, Collectorate, Rayagada.

The District Level Committee Meeting (DLC) on Implementation of Schedule Tribe and other Traditional Forest Dwellers Act, 2006 and Amendment Rule, 2012 was convened on 20-07-2017 at 5.00 P.M in the Sathbhairava Sabha Gruha at Collectorate, Rayagada under the Chairpersonship of Collector & District Magistrate, Rayagada. The following members attended the meeting.

1. Collector cum Chairman, DLC, Rayagada.
2. Project Administrator-cum-Nodal Officer, DLC, Rayagada.
3. Sub Collector-cum-Chairman, HDLC, Gurupur.
4. Asst. Conservator of Forest, Rayagada Forest Division.
5. District Welfare Officer, Rayagada.
6. Sri Aswini Gonnango, ZP Member, Gurupur Block.
7. Special Officer, ITDA, Rayagada.
8. Ad.D. Dist. Welfare Officer, Sub Collectors Office, Gurupur.
9. Sri Anubhinda Rout, Project Manager, Landesa.
10. Sri Nageswar Patra, Sr. Field Expert Officer, Landesa.
11. Sri Sachikanta Mallick, Project Manager, ITDA, Rayagada.
12. Sri Satyanarayan Singh, Technical Expert, ITDA, Rayagada.
13. Sri Bikram Behara, Technical Expert, ITDA, Rayagada.
14. Sri Gangadhar Pradhan, Technical Expert, ITDA, Rayagada.
15. Sri Subodhjeet Pattnaik, Technical Expert, ITDA, Rayagada.

[Signature]
Special Officer
ITDA, Rayagada

At the outset Collector-cum-Chairperson, DLC welcomed all the members present in the meeting and requested the PA, ITDA, Rayagada-cum-Nodal Officer, PRA to initiate agenda wise discussion.

The agenda wise discussion made and decision taken in the District level Committee are as follows.

[Signature]

AGENDA NO.3: Constitution of Forest Right Committee:

The members of the committee discussed the Constitution of forest right committee of each individual block. From the available data it is revealed that out of 2764 villages including hamlets, forest right committee have been constituted in 1881 Nos. of villages leaving 883 Nos. of villages yet to be covered. Out of the villages to be covered, maximum numbers of villages comes under Kasipur Block. Therefore, the Collector-cum-Chairperson, DLC instructed the Sub Collector-cum-Chairman, SDLC, Rayagada to focus more on Kasipur Block area. Both the Sub-Collectors were instructed to impress upon the BDOs for early constitution of FRC in all left out villages latest by 31st August, 2017.

The status of constitution of forest right committee is as follows

| Sl. No | Name of the Sub-Division | Name of the Block | No of villages including Hamlet | No of FRC constituted /reconstituted | Yet to be constituted |
|--------|--------------------------|-------------------|---------------------------------|--------------------------------------|-----------------------|
| 1 | | | 4 | 5 | 6 |
| 2 | Rayagada | Rayagada | 290 | 241 | 58 |
| 3 | | Kasipur | 472 | 150 | 263 |
| 4 | | Kelmar | 212 | 208 | 4 |
| 5 | | K Singpur | 240 | 81 | 159 |
| 6 | Gunupur | Gunupur | 273 | 219 | 56 |
| 7 | | Pachmapur | 127 | 117 | 10 |
| 8 | | Candrapur | 118 | 154 | 64 |
| 9 | | Gadar | 58 | 35 | 23 |
| 10 | | Ramaniguda | 118 | 38 | 80 |
| 11 | | Bissam Cutack | 290 | 287 | 3 |
| 12 | | Mungana | 412 | 351 | 61 |
| | Total | | 2764 | 1881 | 883 |

AGENDA NO.4 Implementation of convergence programme for forest right holders under PRA, 2006 & as per guidelines communicated vide L.R. No. 3057, T.D.A., Rayagada dated 12.04.2016 of Govt. of Or & SC Development Department, Odisha.

The Collector-cum-Chairperson, DLC expressed her displeasure over slow progress on implementation of convergence programme for forest right holders under PRA. In this connection, the following decisions were taken

Contd.

AGENDA NO.5: Demarcation of forest land and correction of ROR in favour of the title holders by the concerned Tahsildars.

The Collector cum-Chairman, DLC expressed his displeasure over slow pace of correction of ROR of Individual, Community and Community Forest Resource Right Claim Cases at Tahasil level. The Sub-Collector-cum Chairman, SDLC, Rayagada & Gumpur were instructed to impress upon the Tahsildars to expedite the process of correction of ROR and demarcation of forest land of all FRA title holders.

The Tahasil wise case records sent to the concerned Tahsildars for correction of ROR & Maps and demarcation thereof of the FRA title holders are as indicated below.

| Sl. No. | Name of the Tahsildar | Case record submitted | | | Case record submitted by the Tahsildars | | |
|---------|------------------------|-------------------------|--|----------------------------|---|--|----------------------------|
| | | Individual case records | Community Right/Community Forest Resource Right Case Records | Total Nos. of Case Records | Individual Claims | Community Right/Community Forest Resource Right Case Records | Total Nos. of Case Records |
| 1 | Tahsildar, Rayagada | 851 | 12 | 843 | 115 | | |
| 2 | Tahsildar, B. Sirapuri | 1736 | 9 | 1797 | | | |
| 3 | Tahsildar, Kolnara | 1641 | - | 1641 | | | |
| 4 | Tahsildar, Kaskipur | 598 | - | 598 | | | |
| 5 | Tahsildar, Bissamantak | 1747 | 4 | 1751 | | | |
| 6 | Tahsildar, Padmapur | 639 | 10 | 649 | | | |
| 7 | Tahsildar, Chandrapur | 3432 | 26 | 3458 | | | |
| 8 | Tahsildar, Gumpur | 2462 | 36 | 2498 | | | |
| 9 | Tahsildar, Rajahagada | 1935 | - | 1935 | | | |
| 10 | Tahsildar, Gudari | 1968 | - | 1968 | | | |
| 11 | Tahsildar, Mungur | 925 | 1 | 926 | | | |
| | Total | 17804 | 179 | 18554 | 115 | | |

Special Officer
T.D.A., Rayagada

Corr. 2/4

07-39-

| Block | Gram Panchayat | Name of the Village/ Mouza | Resolution No./Date of Gram Sabha | Khasra No. | Plot No. | Area (In Ac.) | Kissam | Revised Kissam | Remarks |
|----------|----------------|----------------------------|-----------------------------------|------------|----------|---------------|--------------|----------------|---------|
| Vijigedh | Bharatnagar | Bharatnagar | 20.12.2016 | 18 | 125 | 1.93 | Badh jungle | Non-Forest | Part |
| | | | | 16 | 73 | 6.16 | Patra Jungle | | Part |
| | | | | 3 | 49 | 29.43 | Patra Jungle | | Part |
| | | | | 16 | 51 | 46.57 | Patra Jungle | | Part |
| | | | | 16 | 57 | 6.11 | Patra Jungle | | Part |
| | | | | 16 | 59 | 2.40 | Patra Jungle | | Part |
| | | | | 16 | 64 | 1.37 | Patra Jungle | | Part |
| | | | | 16 | 111 | 6.52 | Patra Jungle | | Part |
| | | | | 16 | 123 | 16.19 | Patra Jungle | | Part |
| | | | | | | | | | Total |

ANY OTHER MATTER

1. Collector cum-Chairperson instructed to write DO letter to the ZP members of the DLC (i.e. ZP members) to attend the DLC meeting positively henceforth.
2. It was decided in the meeting to invite Hon'ble MLAs, PALLIDA, Gunupur as special invitee to attend the DLC. Further, the Project Manager and Technical Experts of both the ITDAs to be invited to attend the next DLC.

Meeting ended with vote of thanks to the chair and the members.

Collector-cum-Chairman
District Level Committee

Date: 01-02-2017.

Memo No. 3048/2017

Copy submitted to the Director (ST)-cum-Special Secretary to Govt. in ST & SC Development Department, Odisha, Bhubaneswar for favour of information.

Collector-cum-Chairman
District Level Committee

Special Officer
I.D.A. Rayagada

Correct

-40-

Annexure II

CERTIFICATE

Certified that all formalities for access under the Forest Rights Act (FRA) 2006 of Amendment Rule, 2013 have been carried out for diversion of 108.82 Hectares of forest land to non forest purposes in village Baidhara, Tal. Baidhara, District of Rayachoti, for mining lease. Baidhara Graphite Mine of Pradhan Industries, Ltd., Baidhara. The Government has given consent to the proposed diversion and its compensation and other measures, if any and fully under the purpose and details of proposed diversion.

| Sl. No. | Gr. P. | Name of the Village | Regulation No. and Date of Govt Order | Area | Forest Type | Non-Forest Use |
|---------|--------|---------------------|---------------------------------------|------|-------------|---------------------------|
| 1. | 108. | Baidhara - Baidhara | 4/16
20.12.2016 | 18 | 125/10 | 1.43 Baidhara Non-Forest |
| 2. | 108. | Baidhara - Baidhara | | 12 | 27/10 | 0.18 Baidhara Non-Forest |
| 3. | 108. | Baidhara - Baidhara | | 16 | 40/10 | 29/12 Baidhara Non-Forest |
| 4. | 108. | Baidhara - Baidhara | | 16 | 51 | 46.57 Baidhara Non-Forest |
| 5. | 108. | Baidhara - Baidhara | | 16 | 57 | 0.11 Baidhara Non-Forest |
| 6. | 108. | Baidhara - Baidhara | | 12 | 57/10 | 2.40 Baidhara Non-Forest |
| 7. | 108. | Baidhara - Baidhara | | 16 | 64/10 | 5.57 Baidhara Non-Forest |
| 8. | 108. | Baidhara - Baidhara | | 16 | 11/10 | 6.52 Baidhara Non-Forest |
| 9. | 108. | Baidhara - Baidhara | | 16 | 12/10 | 12.19 Baidhara Non-Forest |

108.82 Hectares

OR

44. 038 Hectares

108.82 Hectares

[Signature]
21.12-16
Minister
Ministry

[Signature]
Saravanan
Baidhara G.P.



PRADHAN INDUSTRIES

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0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

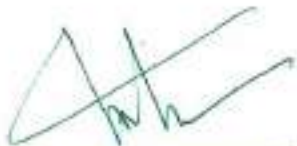
Ref. No

Date

UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxxiii) of Stage-I approval Order]

This is to undertake that mining in a phased manner after taking due care for 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 concern Addl. Principal Chief Conservator of Forest (Central) may direct that the mining activities shall remain suspended till such time, such reclamation activities area satisfactorily executed.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

Phone : 0671 - 2432354
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Annexure - 27

Ref. No

Date

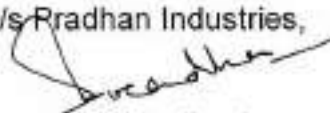
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxxiv) of Stage-I approval Order]

This is to undertake that list of existing village tanks and other water bodies with GPS co-ordinates located within five Km, from the mine lease boundary has been prepared & approved. The User Agency undertakes to implement the scheme at Project Cost.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



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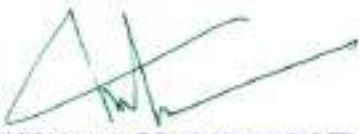
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Annexure 28

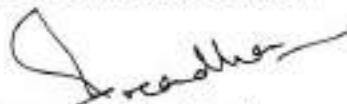
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxxv) of Stage-I approval Order]

This is to undertake to 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 regularly;


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)
PARTNER.



PRADHAN INDUSTRIES

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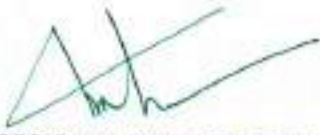
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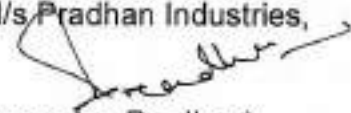
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxxvi) of Stage-I approval Order]

This is to undertake that the user agency will be abide by any other condition that may be stipulated from time to time, in the interest of conservation, protection and development of forest & wildlife by MoEF&CC, Regional Office, Bhubaneswar.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)

PARTNER.



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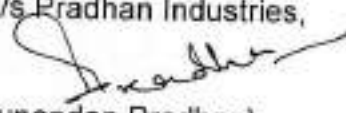
UNDERTAKING BY USER AGENCY.

[Ref: Condition no (xxxvii) of Stage-I approval Order]

This is to undertake that the user agency comply all the provision of the all Acts, Rules, Regulations Guidelines, Hon'ble Court Order(s) and NGT Order(s) pertaining to this project, if any, for the time being in force, as applicable to the project.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

For M/s Pradhan Industries,


(Sunandan Pradhan)

PARTNER.



Government of India भारत सरकार
Ministry of Environment, Forest & Climate Change/ पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Eastern Regional Office/ पूर्वी क्षेत्रीय कार्यालय
A/3, Chandrasekharpur/ ए/3, चन्द्रसेखरपुर
Bhubaneswar - 751 023/ भुवनेश्वर - 751 023



Telephone: 0674-2301213, 2301248, 2302452, 2302453. Fax: 0674-2302432. E-mail: roez.hcr-mef@nic.in

No.: 5-ORA300/2016-BHU

16th April, 2019

To

The Addl. Chief Secretary,
Forest & Environment Department,
Govt. of Odisha, Sachivalaya,
Bhubaneswar - 751 001.

Sub: Diversion of 44.038 ha of forest land including 9.286 ha of forest land in Safety Zone within total ML area of 58.704 ha in Bainibasa Graphite Mines in Rayagada district, Odisha by Pradhan Industries - reg.

Ref: 1) Ministry's in-principle approval letter No. 8-58/2017-FC dated 22.01.2018.
2) This office letter of even number dated 07.03.2018.

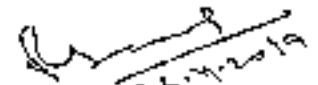
Sir,

With reference to the above, I am directed to inform that this office vide reference (2) above had stipulated one additional condition for compliance by the user agency. This condition was stipulated considering the fact that mining activities shall embark upon a virgin undisturbed forest zone and accordingly, to know the impact of mining on the flora, fauna & wildlife of the area and the eco-system around. Subsequently considering review application from the user agency, the matter was examined/ reviewed and it is observed that the project proponent has carried out the EIA & EMP study through the NAB accredited consultant as per TOR issued by Ministry and submitted the report in the month of December, 2017. Subsequently, the Ministry also has issued environment clearance on the basis of above study vide letter dated 23.04.2018. The study has taken into account the possible impact studies on local flora, fauna, wildlife, water bodies & streams within 10 KM radius around the lease boundary due to the proposed mining activities and accordingly the possible mitigative measures had been suggested.

Considering the fact that the addl. condition No. (xxxviii) stipulated by this office vide letter of even number dated 07.03.2018 has subsequently been complied / taken care of while granting EC by the Ministry the compliance of the said additional condition has become redundant.

Hence, the said addl. condition No. (xxxviii) stipulated vide this office letter of even number dated 07.03.2018 is hereby deleted and the State Govt. shall submit the in-principle compliance report of the stipulated conditions granted by Ministry vide letter dated 22.01.2018 (Ref. I).

Yours faithfully,


(R. K. Samal)
Dy. IGF (Central)

Copy to:

1. The PCCF, Forest Department Govt. of Odisha, Aranya Bhawan, Bhubaneswar.
2. The IGF (FC), Ministry of Environment, Forest & Climate Change, Indira Paryaveeran Bhawan, Jor Bagh Road, New Delhi - 110003.
3. The Addl. PCCF & Nodal Officer, Forest Department, Govt. of Odisha, Aranya Bhawan, Bhubaneswar.
4. The DFO, Rayagada Forest Division, Dist- Rayagada, Odisha
5. M/s Pradhan Industries, Telanga Bazar, Near Puri Ghat Police Station, Cuttack - 753 009
6. Guard file.

Dy. IGF (Central)



PRADHAN INDUSTRIES

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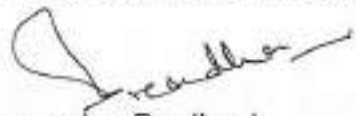
Date

Annexure - 32

UNDERTAKING

This is to undertake that 9.286 ha. of forest land is to be maintained as safety zone and in no circumstances, it shall be used for mining and other allied activities.

For M/s. PRADHAN INDUSTRIES,


(Sunandan Pradhan)
PARTNER




DIVISIONAL FOREST OFFICER
RAYGADA DIVISION



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Date

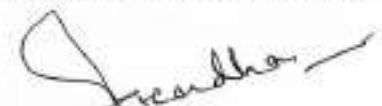
ANNEXURE-XIV

UNDERTAKING

This is to undertake that "Demarcation of the lease area on the ground posting four feet high cement concrete pillars embedded to feet inside the soil with serial number, forward and backward bearings, and distance from pillar to pillar. The map of lease area showing different kinds of forest land using DGPS survey data's and latitude and longitude of each pillar will be submitted to the Divisional Forest Officer, Rayagada for his reference before commencement of work on final forest clearance.



For M/s. PRADHAN INDUSTRIES,


(Sunandan Pradhan)
PARTNER


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION



OFFICE OF THE REGIONAL OFFICER
STATE POLLUTION CONTROL BOARD, ODISHA
[DEPARTMENT OF FOREST & ENVIRONMENT, GOVT. OF ODISHA]
Plot No 287/A, 1st Lane, Kasturi Nagar, Rayagada, 765001

Lett No. 159

By Online/ Regd. Post

Date 17.01.2018

OFFICE MEMORANDUM

In consideration of the Online Application No- 1839337 for obtaining Consent to Establish (NOC) for M/s Bainibasa Graphite Mines and Beneficiation Plant, the State Pollution Control Board is pleased to convey its Consent to Establish (NOC) under section 25 of Water (Prevention and Control of Pollution) Act, 1974 and section 21 of Air (Prevention and Control of Pollution) Act, 1981 for following mines & plant facilities and production capacities:

| Product | Capacity |
|----------------------|-----------|
| Graphite Ore Mining | 13,272TPA |
| Graphite Concentrate | 841TPA |

At- Bainibasa, PO- Bhairabagada under Muniguda Tahasil, (In Plot No- 68/P,66 Khata No -2 Plot No- 35/P,50/P,53/P,55/P,56/P,63/P,69/P,16/P,21/P,52/P,54/P,58/P, Khata No- 8, Plot No- 112,113/P,67/P,108/P Khata No-10, Plot No-37/P, Khata No-11, Plot No-65 Khata No-14, Plot No- 22/P,49/P,51,57,59/P,64/P,111/P,123/P, Khata No-16, Plot No- 60/P, Khata No- 17, Plot No- 125/P Khata No- 18, to an extent of land 58.704Ha) in the District of Rayagada with the following conditions.

GENERAL CONDITIONS.

1. This consent to establish is valid for the raw materials, product, manufacturing process and capacity mentioned in the application form. This order is valid for five years, which means the proponent, shall commence construction of the project within a period of five years from the date of issue of this order. If the proponent fails to do substantial physical progress of the project within five years then a renewal of this consent to establish shall be sought by the proponent.
2. The industry shall comply with the provisions of Environment Protection Act, 1986 and the rules made there under with their amendments from time to time such as the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 as amended from time to time. Hazardous Chemical Rules / Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments there under. The industry shall also comply with the provisions of Public Liability Insurance Act, 1991, if applicable.
3. The mine shall apply for grant of Consent to operate under section 25/26 of Water (Prevention and Control of Pollution) Act, 1974 & Air (Prevention and Control of Pollution) Act, 1981 at least 3 (Three) months before the commercial production and obtain Consent to Operate from this Board.
4. This consent to establish is granted subject to statutory and other clearances from Govt. of Odisha and/or Govt. of India, as and when applicable.
5. Adequate effluent treatment facilities shall be provided such that the quality of sewage and trade effluent satisfies the standards as prescribed under E(P) Rule or as prescribed by the Central pollution Control Board and/or State Pollution Control Board or otherwise stipulated in the special conditions.
6. The Board may impose further conditions or modify the conditions stipulated in this order during installation, and/or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and/or any information is suppressed in the application form.

SPECIAL CONDITIONS**A. GENERAL:**

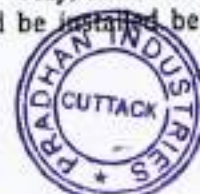
1. The Integrated project of Graphite Mine & Ore Beneficiation plant has to obtain Environmental Clearance from the Ministry of Environment, Forest & Climate Change, Government of India, New Delhi prior to proceed for establishment of the project & submit the copy to State Pollution Control Board, Odisha, Rayagada.



2. Good housekeeping practice shall be followed to avoid any dust/ odour nuisance in and around plant & Mines premises.
3. The unit shall abide by E (P) Act, 1986 and Rules framed there under.
4. This Consent order has been issued without prejudice to any legal dispute arises in future with respect to the ownership of the land and other land disputes.
5. Industry shall provide adequate sanitation facilities for its workers to avoid any open defecation and unhygienic condition in its surrounding areas.
6. The Unit shall apply and obtain Consent to Establish (NOC) from the Board in case of any addition and alternation of the plant and Mining in future.
7. Plantation shall be raised in an specified area including a 7.5 m wide green belt in the safety zone around the mining lease, DB dump(s), along the roads, etc. by planting the native species in consultation with the local DFO/Agriculture Department. In addition, plantation shall also be raised in the backfilled and reclaimed area and around water body. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.
8. No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest & Climate Change.
9. No change in the calendar plan including excavation, quantum of mineral graphite and waste should be made.
10. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

B. WATER POLLUTION:

1. Process waste water from ores beneficiation plant shall be routed through series of settling tanks and shall be recycled in the process. Unit has to ensure zero discharge from the graphite ore beneficiation plant.
2. The sludge (tailings) from the settling tanks/ponds shall be disposed off in back filling of mined out area with soil cover followed by plantation.
3. The unit shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the 1st and 2nd order streams, emanating or passing through the mine lease during the course of mining operation.
4. Regular monitoring of water quality in upstream and downstream of perennial nallahs falling in the impact zone shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment, Forest & Climate Change and its Regional Office, Bhubaneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
5. Appropriate measures shall be taken for treatment of the upper catchment of the mine lease area.
6. 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.
7. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the mining operation. The periodic monitoring [(at least four times in a year-per-monsoon (April-May), Monsoon (August))] shall be carried out in consultation with the State Ground Water Board/ Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment, Forest & Climate Change and its Regional Office, Bhubaneswar, the Central Ground Water Board and SPCB. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.
8. The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water, required for the project
9. Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
10. Appropriate mitigate measures should be taken to prevent pollution of nearby River in consultation with the State Pollution Control Board.
11. Sewage Treatment Plant shall be installed for the sewage to be generated from domestic activities & ETP shall also be provided for the workshop and wastewater generated during the mining operation.
12. Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.



13. Adequate numbers of check dams, check weirs and settling ponds shall be constructed at appropriate places of the mine lease area to prevent direct flow of runoff to nearby water bodies in consultation with Regional Officer, SPCB, Rayagada. The surface run off water from the runoff management system shall meet the prescribed standards.
14. Retention wall shall be constructed at the toe of topsoil dump and OB dump. Garland drain shall be constructed around topsoil dumps, over burden dumps and mineral stack yards terminating at settling pit to prevent direct disposal of runoff to nearby water bodies. Garland drain and sedimentation pit shall be de-silted after monsoon or as and when required. Dimension of the retaining wall at the toe of the OB dump(s) and the OB benches within the mine to check run-off and siltation should be based on the rain fall data. The runoff discharge quality from runoff management system shall meet the standards prescribed.
15. Quantification of surface runoff and other wastewater generation in the mine shall be done and report on runoff management practice as well as wastewater management practices shall be furnished to the Board before the start of monsoon every year. The report of runoff management practices shall be submitted along with a map indicating the flow direction of runoff and management systems.
16. Wheel washing facility for the ore transport vehicles shall be provided at the exit point of the mine.
17. Mine has to take adequate steps to prevent the entry of wash out materials into surrounding streams/River/water bodies during its construction phase.

C. AIR POLLUTION:

1. The dust suppression systems of adequate capacity shall be provided to control fugitive emissions at feeding hoppers, Screens and all transfer points of conveyors of raw material handling and conveying systems, Turbo Pan Mixer and Transit Mixer including raw materials stacking yards. The ambient air quality inside the mine premises shall conform to the National Ambient Air Quality Standards prescribed under E (P) Rule.
2. Effective safeguard measures, such as regular water sprinkling through fixed type water sprinklers, fog cannons & water Tankers shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board and State Pollution Control Board in this regard.
3. Vehicular emission 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 mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
4. Since Villages are in close proximity of mines so no blasting shall be allowed for mining activities to avoid any damage to residential houses.
5. Drills shall either be operated with dust extractors or equipped with water injection system to minimize dust generation in the work environment.
6. The top Soil generated shall be stored at earmarked site (s) only and stabilized & ultimately shall be used for land reclamation and plantation.
7. The over burden of mine & Tailings from Beneficiation plant generated during the course of mining shall be stacked at earmarked dump site (s) and stabilized prior to use for back filling of mined out area followed by plantation.
8. Water sprinkling shall also be carried out on haul roads at desired interval and should always be in wet condition. Haulage roads shall be devoid of ruts and potholes and shall be maintained properly to avoid generation of dust during movement of vehicles.
9. The vehicles carrying ore for transportation from the mine shall be covered with tarpaulin.
10. Mining Lessee has to maintain the roads passing through the habitation area as well as other strategic point on the National Highway dust free for mineral transportation.
11. At least six Ambient Air Quality Monitoring Stations shall be established in core zone and buffer zone for monitoring of ambient air quality and location of the stations shall be decided based on the metrological data, topographical features and environmentally and ecologically sensitive targets in consultation with the Regional Officer, State Pollution Control Board.
12. Monitoring of Ambient Air Quality and fugitive dust emission of the mine shall be done twice in a week (24 hourly) at a particular site and data shall be submitted to the State Pollution Control Board once in every six months.



13. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
 14. Ambient air quality monitoring data, noise monitoring data and water/ wastewater quality monitoring data shall be electronically displayed at the entry point of the mine or at a suitable location of the mine.
 15. Regular monitoring of free silica in the dust will be carried out and records maintained. It shall be ensured that the levels of silica do not exceed the prescribed limit. The workers shall be provided with personal protective measures to guard against in hailing silica dust.
 16. The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM10) and NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)). The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment, Forest & Climate Change, which is available on the website of the ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- D. SOLID & HAZARDOUS WASTE:**
1. The solid wastes, rejects/dust generated from the plant shall be collected and suitably disposed off in an environmental sound manner and in no case such wastes shall be disposed of outside its premises.
 2. Mine has to abide by Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 & has to obtain authorization under this Rule prior to commissioning of the mining activities.

The Board may alter/modify the above conditions or stipulate any further condition in the interest of environment protection. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Odisha and any other Court of Law relating to the subject matter.


 17.01.18
REGIONAL OFFICER

To

Sri Sunandan Pradhan, Partner,
 M/s Bainibasa Graphite Mine & Beneficiation Plant
 Of Pradhan Industries
 At/PO Telenga Bazar,
 Dist Cuttack-09, Odisha.

Memo No _____ Dt. _____

Copy forwarded to

1. The Member Secretary, State Pollution Control Board, Bhubaneswar.
2. The Collector & District Magistrate, Rayagada
3. The D.F.O., Rayagada
4. General Manager, District Industries Centre, Rayagada
5. Director of Factories & Boiler, Bhubaneswar.
6. Copy to Guard file.

REGIONAL OFFICER





PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriesctc@yahoo.com

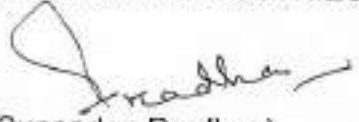
Ref. No

Date

UNDERTAKING

This is to undertake that the CTO (Consent to Operate) will be submitted to the Govt. and all other concerned when it will be obtained.

For M/s. PRADHAN INDUSTRIES,


(Sunandan Pradhan)
PARTNER




DIVISIONAL FOREST OFFICER
RAYGADA DIVISION



PRADHAN INDUSTRIES

Phone : 0671 - 2432354
0671- 2412299

Regd. & Head Office : Telenga Bazar, Cuttack - 753 009, Odisha
E-mail : pradhanindustriescto@yahoo.com

Ref. No

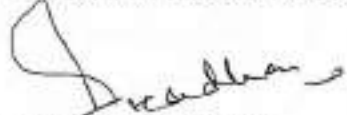
Date

UNDERTAKING

This is to undertake that there shall be no breaking of 12. 418 ha of private land in the ML area as indicated in the proposed land use plan.

For M/s. PRADHAN INDUSTRIES,




(Sunandan Pradhan)
PARTNER.


DIVISIONAL FOREST OFFICER
RAYGADA DIVISION

**STATEMENT SHOWING THE PAYMENT DETAILS IN PRESCRIBED
FORMAT IN REGARDS TO DIVERSION OF 44.038 HA REVENUE FOREST
LAND AT PRESENT AND AS ON 25.10.1980 OF BAINIBASA GRAPHITE MINE
IN BAINIBASA VILLAGE UNDER MUNIGUDA TAHASIL IN THE DISTRICT OF
RAYAGADA OF M/S. PRADHAN INDUSTRIES.**

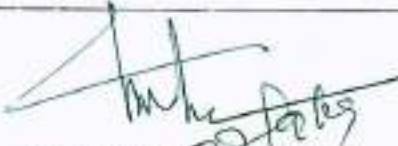
| Sl. No. | Particulars | Details |
|---------|---|--|
| 1 | State / District / Forest Division to which proposal relates | Odisha / Rayagada / Rayagada Forest Division, Odisha |
| 2 | Name of User Agency, Nature of the Proposal | M/s. Pradhan Industries / Bainibasa Graphite Mine, village – Bainibasa, Tahasil Muniguda, Dist: Rayagada |
| 3 | Extent of forest area involved | 44.038 HA Revenue forest land recorded as forest as per present settlement and as on 25.10.1980 |
| 4 | whether original or extension | Original |
| 5 | If extension of lease, please clarify if proposal involves additional forest area, and if so, specify | NIL |
| 6 | Date of 1 st Stage Clearance | F. No. 8-58/2017-FC, Date 22.01.2018 |
| 7 | Extension of CAMPA charges, head wise. | |
| a. | Compensatory Afforestation | <p>1) Rs. 1,17,61,000.00 (Rupees: One Crore Seventeen Lakhs Sixty one thousand only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH18363740467, Dtd. 27.12.2018 in ORRISA CAMPA, Account No.: 150825824824845, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003.</p> <p>2) Rs. 1,02,16,000.00 (Rupees: One Crore Two Lakhs Sixteen thousand only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19234820868, Dtd. 22.08.2019 in ORRISA CAMPA, Account No.: 150825824824754, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003</p> |
| b. | Additional CA | NIL |
| c. | Penal CA | NIL |
| d. | Catchment Area Treatment | NIL |

| | | |
|----|--|---|
| e. | Site Specific Wildlife Conservation Plan | Rs. 43,90,000.00 (Rupees: Forty Three lakhs Ninety Thousand only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19010889932, Dtd. 10.01.2019 in ORRISA CAMPA, Account No.: 150825824824138, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003. |
| f. | Regional Wild Life Management Plan | Rs. 48,13,728.00 (Rupees: Forty Eight Lakhs Thirteen Thousand Seven Hundred Twenty Eight only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19010889932, Dtd. 10.01.2019 in ORRISA CAMPA, Account No.: 150825824824138, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003 |
| g. | Net Present Value (NPV) | Rs. 2,75,67,788.00 (Rupees Two Crores Seventy Five Lakhs Sixty Seven Thousand Seven hundred Eighty eight only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.: BKIDH17010512274, Dtd. 10.01.2017 in ORRISA CAMPA, Account No.: CAMPAORMIN 225082016088, IFSC Code: UBIN0534498, Bank Address: Union Bank of India Branch, 52, Sunder Nagar, New Delhi -110003. |
| h. | Penal Net Present Value | NIL |
| i. | Additional Charges for diversion area falling under notified / Protected area. | NIL |
| j. | Any other charges / Levies (Pl. Specify) | |
| i) | Gap Plantation & SMC Activities on degraded forest land coming within 100 meters outside of ML Boundary line | <p>1) Rs. 13,53,000.00 (Rupees Thirteen Lakhs Fifty three thousand only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19010889932, Dtd. 10.01.2019 in ORRISA CAMPA, Account No.: 150825824824138, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003.</p> <p>2) Rs. 3,00,031.00 (Rupees Three Lakhs Thirty one only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19234820868, Dtd. 22.08.2019 in ORRISA CAMPA, Account No.: 150825824824754, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003.</p> |

| | ii) Afforestation on degraded Forest Land 1.5 times of Safety Zone area. | (6) 1) Rs. 58,710.00 (Rupees Fifty eight thousand Seven hundred Ten only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19010889932, Dtd. 10.01.2019 in ORRISA CAMPA, Account No.: 150825824824138, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---|---|------------|--------------|--------------|------------|-----------------------------------|------------------|----------------|---------------------------------|-------------|------------------|----------------|-------------|------------|------------------|----------------|--------------|------------------|--------------------|------|------------|------------------|--------------|-------|------------|------------------|--------------|-----|------------|------------------|-------------|------------|------------|------------------|-----------|-----------|------------|------------------|-----------|----|--------------|--|-----------------------|--|--|--|
| | | (7) 2) Rs. 16,863.00 (Rupees Sixteen Thousand Eight hundred Sixty three only) has been transferred through online portal in the account of Ad-hoc CAMPA vide UTR No.:BKIDH19234820868, Dtd. 22.08.2019 in ORRISA CAMPA, Account No.: 150825824824754, IFSC Code: CORP0000371, Bank Address: Corporation Bank, Lodhi Complex Branch, Block 11, CGO Complex, Phase 1, Lodhi Road, New Delhi – 110003. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Details of Bank Draft Details (Bank Draft No., Date and Amount) head wise against items indicated in para 7: | NIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | Whether deposited by RTGS, if so, the particulars and date of remittance; | <table><tr><th>Date</th><th>UTR No.</th><th>Amount (Rs.)</th><th>Item</th></tr><tr><td>10.01.2017</td><td>BKIDH17010512274</td><td>2,75,67,788.00</td><td>NPV</td></tr><tr><td>27.12.2018</td><td>BKIDH18363740467</td><td>1,17,61,000.00</td><td rowspan="2">CA</td></tr><tr><td>22.08.2019</td><td>BKIDH19234820868</td><td>1,02,16,000.00</td></tr><tr><td>10.01.2019</td><td>BKIDH19010889932</td><td>43,90,000.00</td><td>WLCP</td></tr><tr><td>10.01.2019</td><td>BKIDH19010889932</td><td>48,13,728.00</td><td>RWLMP</td></tr><tr><td>10.01.2019</td><td>BKIDH19010889932</td><td>13,53,000.00</td><td>Gap</td></tr><tr><td>22.08.2019</td><td>BKIDH19234820868</td><td>3,00,031.00</td><td>Plantation</td></tr><tr><td>10.01.2019</td><td>BKIDH19010889932</td><td>58,710.00</td><td>1.5 times</td></tr><tr><td>22.08.2019</td><td>BKIDH19234820868</td><td>16,863.00</td><td>SZ</td></tr><tr><td colspan="2">Total</td><td>6,04,77,120.00</td><td></td></tr></table> | Date | UTR No. | Amount (Rs.) | Item | 10.01.2017 | BKIDH17010512274 | 2,75,67,788.00 | NPV | 27.12.2018 | BKIDH18363740467 | 1,17,61,000.00 | CA | 22.08.2019 | BKIDH19234820868 | 1,02,16,000.00 | 10.01.2019 | BKIDH19010889932 | 43,90,000.00 | WLCP | 10.01.2019 | BKIDH19010889932 | 48,13,728.00 | RWLMP | 10.01.2019 | BKIDH19010889932 | 13,53,000.00 | Gap | 22.08.2019 | BKIDH19234820868 | 3,00,031.00 | Plantation | 10.01.2019 | BKIDH19010889932 | 58,710.00 | 1.5 times | 22.08.2019 | BKIDH19234820868 | 16,863.00 | SZ | Total | | 6,04,77,120.00 | | | |
| Date | UTR No. | Amount (Rs.) | Item | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2017 | BKIDH17010512274 | 2,75,67,788.00 | NPV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27.12.2018 | BKIDH18363740467 | 1,17,61,000.00 | CA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22.08.2019 | BKIDH19234820868 | 1,02,16,000.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2019 | BKIDH19010889932 | 43,90,000.00 | WLCP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2019 | BKIDH19010889932 | 48,13,728.00 | RWLMP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2019 | BKIDH19010889932 | 13,53,000.00 | Gap | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22.08.2019 | BKIDH19234820868 | 3,00,031.00 | Plantation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2019 | BKIDH19010889932 | 58,710.00 | 1.5 times | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22.08.2019 | BKIDH19234820868 | 16,863.00 | SZ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | | 6,04,77,120.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Bank (Corporation Bank, Lodhi Complex / Union Bank of India, Sunder Nagar) in which deposited, with date of deposition. | <table><tr><th>Date</th><th>Name of Bank</th><th>Amount</th></tr><tr><td>10.01.2017</td><td>Union Bank of India, Sunder Nagar</td><td>2,75,67,788</td></tr><tr><td>27.12.2018</td><td>Corporation Bank, lodhi Complex</td><td>1,17,61,000</td></tr><tr><td>10.01.2019</td><td>-do-</td><td>1,06,15,438</td></tr><tr><td>22.08.2019</td><td>-do-</td><td>1,05,32,894</td></tr><tr><td colspan="2">TOTAL</td><td>6,04,77,120</td></tr></table> | Date | Name of Bank | Amount | 10.01.2017 | Union Bank of India, Sunder Nagar | 2,75,67,788 | 27.12.2018 | Corporation Bank, lodhi Complex | 1,17,61,000 | 10.01.2019 | -do- | 1,06,15,438 | 22.08.2019 | -do- | 1,05,32,894 | TOTAL | | 6,04,77,120 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | Name of Bank | Amount | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2017 | Union Bank of India, Sunder Nagar | 2,75,67,788 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27.12.2018 | Corporation Bank, lodhi Complex | 1,17,61,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.01.2019 | -do- | 1,06,15,438 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22.08.2019 | -do- | 1,05,32,894 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 6,04,77,120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Any other remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Countersigned


 Principal Chief Conservator of Forests
 (Forest Division & Nodal Officer FC Act)
 O/o. the P.C.C.F.


 Divisional Forest Officer,
 Rayagada Forest Division
DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Schemes

Annexure - 'A' to 'J'



No. E44F10

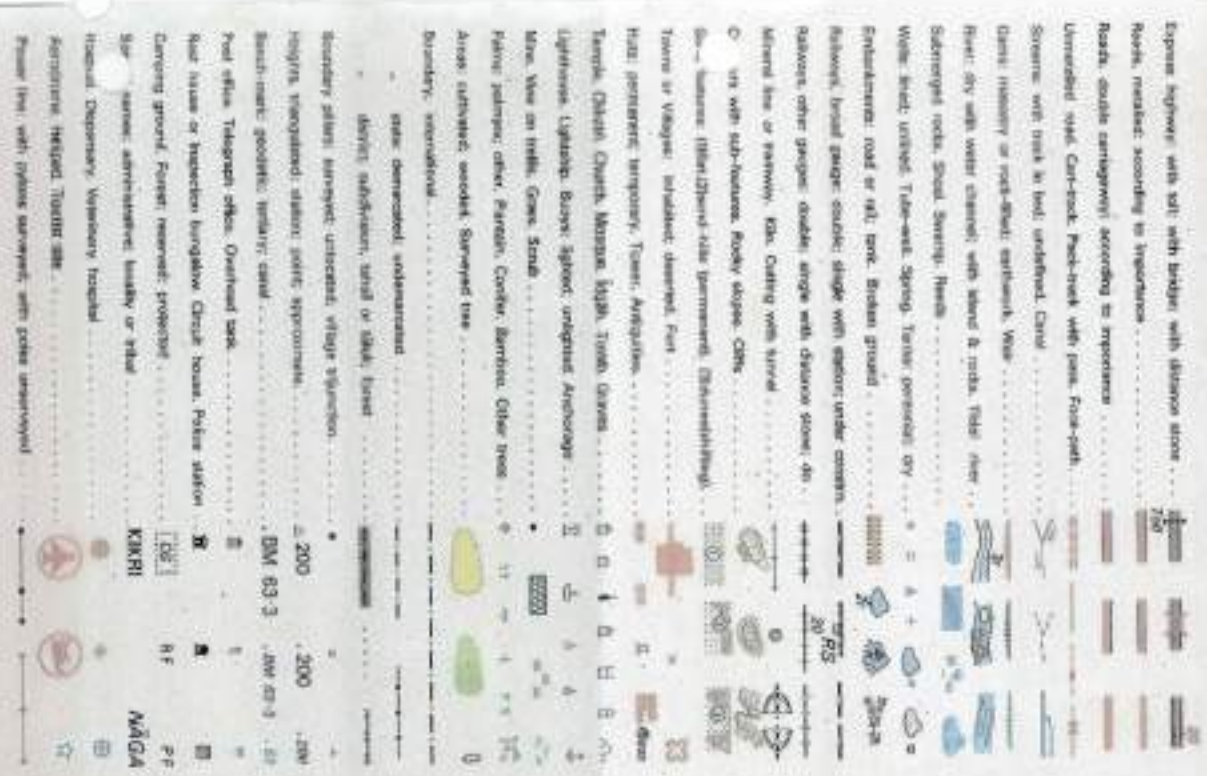
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|----------------------------|-----------------------------|-----------------------------|
| E44F5
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ORISSA | E44F9
Kandul
ORISSA | E44F13
Kandul
ORISSA |
| E44F6
Baisama
ORISSA | E44F10
Baisama
ORISSA | E44F14
Baisama
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| E44F7
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ORISSA | E44F11
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ORISSA |

भारतीय सर्वेक्षण विभाग
SURVEY OF INDIA
PRICE ₹ 04/-

1st Edition 2008.

CONVENTIONAL SYMBOLS



REFERENCE

AND
Scale 1:50,000

NOTES

1. This map is a reproduction of the original map and is not a new survey.
2. The map is a reproduction of the original map and is not a new survey.
3. The map is a reproduction of the original map and is not a new survey.
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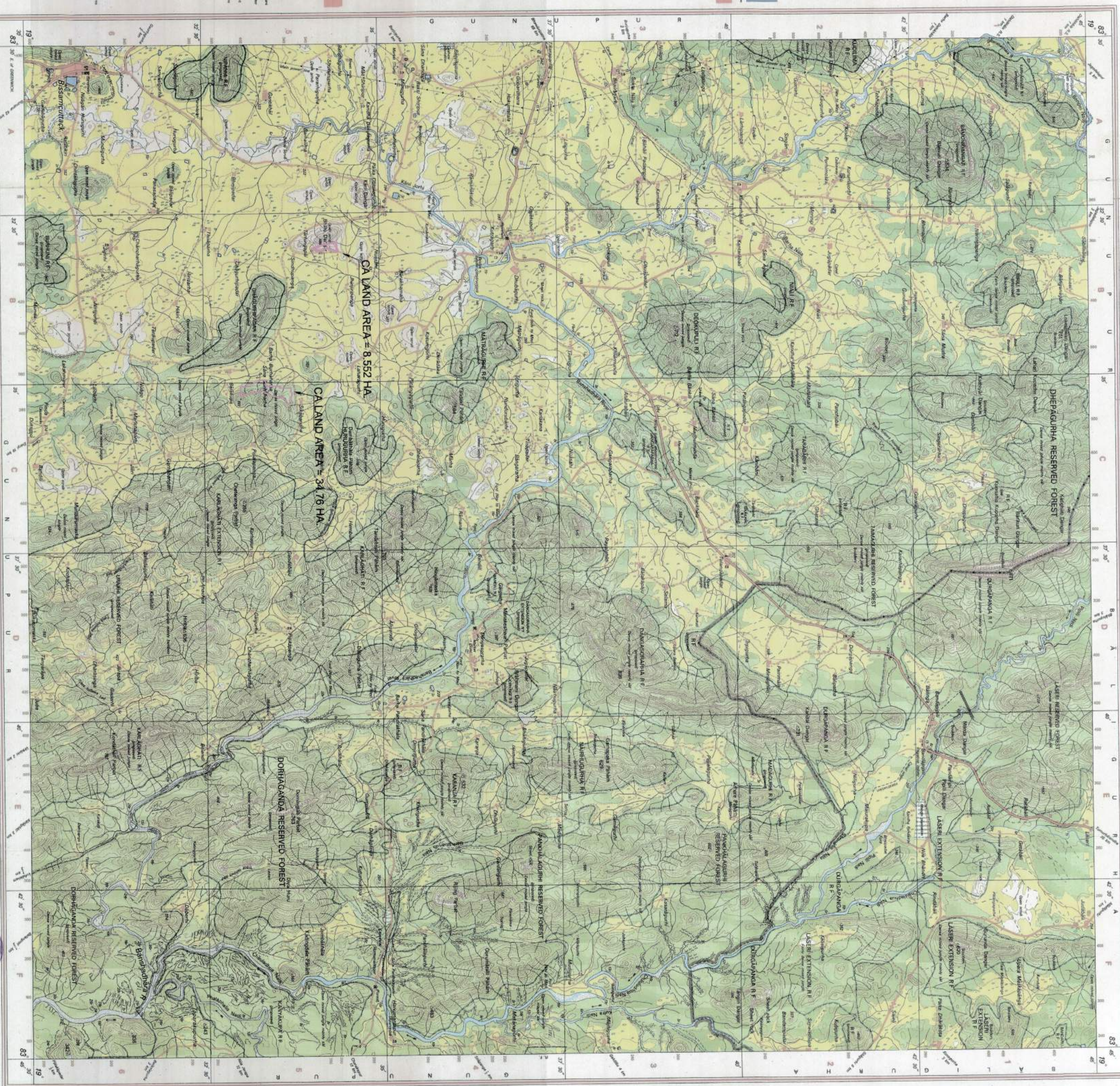
COMPLETION INDEX

1. Completion Index
2. Completion Index
3. Completion Index
4. Completion Index
5. Completion Index
6. Completion Index
7. Completion Index
8. Completion Index
9. Completion Index
10. Completion Index

Projection - UTM Datum - WGS 84
Magnetic Variation from True North about 2 Years in 2005.
Actual change negligible
1:50,000
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Director
Chief District Officer
Survey Branch
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory
B. B. Laboratory

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WEBSITE - www.surveyofindia.gov.in
DIVISIONAL POWER OFFICER
RAYAGADA DIVISION



CA LAND AREA

CA LAND AREA

CA LAND AREA

**PLAN FOR
RECLAMATION OF THE ML AREA
UNDER PROVISIONS OF PARA 5.2(I) (a) OF FC ACT
GUIDE LINES**

**As it pertains to Diversion of 44.038ha of Forest
land in case of Bainibasa Graphite Mine of M/s
Pradhan Industries in District Rayagada.**

Compliance to:

**Condition no. xi of in-principle Approval order vide F.No.8-58/2017-FC Dated
22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.**

PLAN FOR RECLAMATION OF THE ML AREA
UNDER PROVISIONS OF PARA 5.2(i) (a) OF FC ACT GUIDE LINES.

1. INTRODUCTION.

Bainibasa Graphite Mining Lease over an area of 58.704ha at village Bainibasa under Muniguda Tahasil of Rayagada District has been granted by Steel & Mines Department, Government of Odisha vide No Proceedings No II (GR) SM-01/2017/379/SM Dated 10.01.2017 and lease deed has been executed on 11th January 2017. The ML area contains 44.038ha of Revenue Forest land and lease has applied for approval u/s 2(ii) of the Forest (Conservation) Act, 1980 vide proposal No FP/OR/MIN/24824/2017. The MoEF&CC, New Delhi, Government of India has issued "In Principle Approval Order" vide F. No 8-58/2017 FC Dated 22nd January, 2018.

In the "In Principle Approval Order" a set of Stipulated conditions has been set out by the MoEF&CC, New Delhi for compliance before issue of Final Approval Order "Stage-II Order". The Condition (xi) of Para-2 reads as follows.

(xi) The Lessee has to carry out reclamation of the ML area as per the provisions of the approved reclamation plan. Therefore, the lessee has to submit Phased reclamation plan (as per provision of Para 5.2(i)(a) of FC Act guidelines) for its implementation at Project Cost.

This plan is prepared to comply this condition.

2. PRESENT SCENARIO:

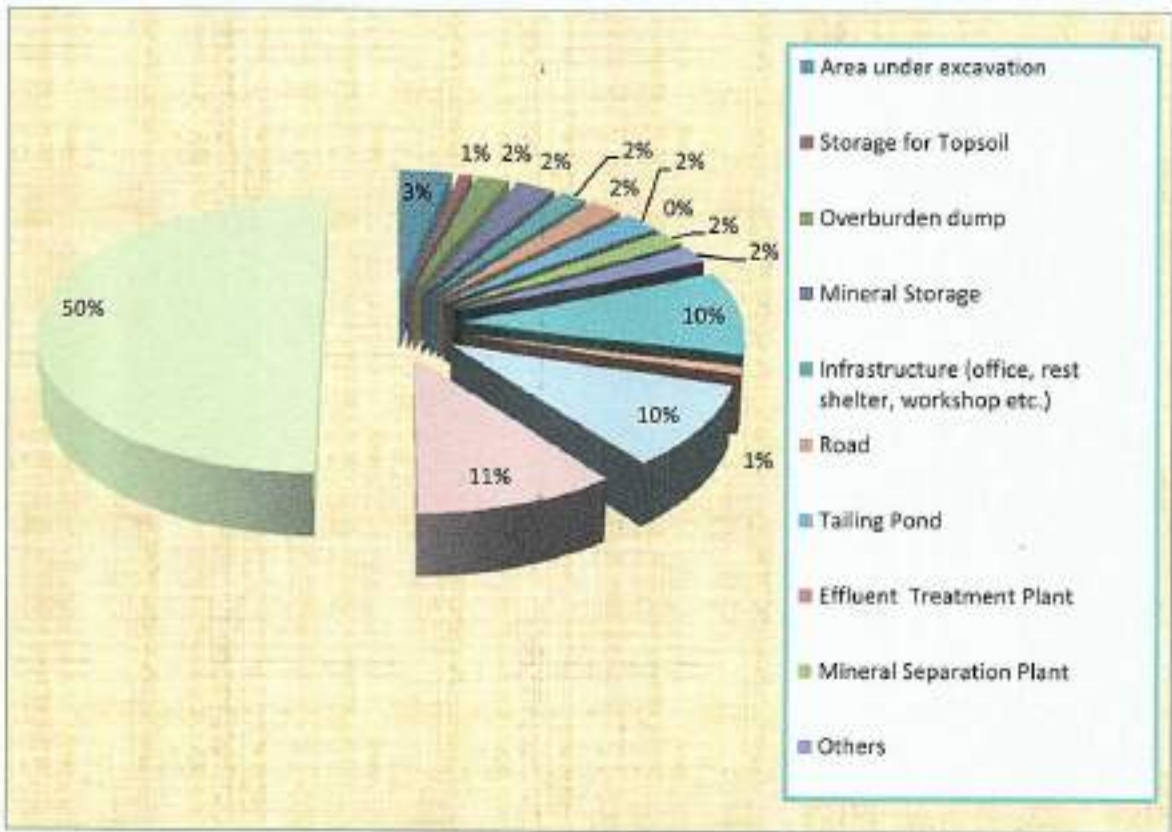
Bainibasa Graphite Mining project is a new project and after obtaining approval under Forest Conservation Act, 1980 and Environmental Clearance, mining activities will be taken up by the lease in accordance with the approved Mining Plan. The present Mining Plan has been approved by the Regional Controller of Mines, Bhubaneswar vide Order no MP/OTFM/20-OR/BHU/2016-17//09/ dated 17.11.2016 for a period of 5 year from opening of the Mine.

The Proposed Land Use Pattern at Conceptual stage is as follows.

Table 1. Land use Pattern at the end of Conceptual stage.

| Sl. No. | Type of land use | As at the end of Conceptual period (life of mine) (ha) | Forest land (In Ha) | Non Forest Land (In Ha) |
|-------------------------------------|--|--|---------------------|-------------------------|
| 1 | Area under excavation | 3.885 | 3.885 | 0 |
| 2 | Storage for Topsoil | 0.927 | 0.927 | 0 |
| 3 | Overburden dump | 2.338 | 2.338 | 0 |
| 4 | Mineral Storage | 2.945 | 2.945 | 0 |
| 5 | Infrastructure (office, rest shelter, workshop etc.) | 2.000 | 2.000 | 0.000 |
| 6 | Road | 2.5 | 2.5 | 0 |
| 7 | Railways | --- | --- | --- |
| 8 | Tailing Pond | 2.848 | 2.848 | 0 |
| 9 | Effluent Treatment Plant | 0.064 | 0.064 | 0 |
| 10 | Mineral Separation Plant | 2.136 | 2.136 | 0 |
| 11 | Township area | --- | --- | --- |
| 12 | Others | | | |
| | Water storage / reservoir | 0.65 | 0.65 | 0 |
| | Rain water harvesting pond | 0.9 | 0.9 | 0 |
| | Sedling pond (4 res.) | 0.95 | 0.95 | 0 |
| Sub total | | 33.191 | 33.191 | 0 |
| 13 | 7.5m wide safety zone along M.L boundary | 2.253 | 0.737 | 1.516 |
| 14 | 50m wide barrier along perennial nala bank | 9.2 | 8.549 | 0.651 |
| 15 | Nala | 1.073 | 1.073 | 0 |
| 16 | Barren area to be rehabilitated / planted | 11.617 | 11.536 | 0.081 |
| 16 | Remaining area | - | - | - |
| Sub total | | 24.143 | 21.895 | 2.248 |
| Total | | 46.286 | 44.038 | 2.248 |
| Non Forest land (un Touched) | | 12.418 | 0 | 12.418 |
| G. Total (ML Area) | | 58.704 | 44.038 | 14.666 |

Figure 1 Land use Pattern as in the current Mining Scheme



The User Agency has applied for grant of Environment Clearance vide Proposal No IA/OR/MIN/ 62694/ 2017 and Final presentation has been made before EAC (Non Coal Mining), MoEF&CC, New Delhi on 26.02.2018 and Committee has recommended for issue of Environmental Clearance. The EC is awaited.

3. Mining Activities:

The present Mining has prescribed for Open Cast Mining. There is provision of two mining pit i.e. Quarry – I and Quarry –II. The annual development of Quarry –I & Quarry-II is as follows.

3.A Strategy for Development : Year wise development proposal has been given from one end to another end in the interest of scientific mining and protection of environment.

➤ 1st year Development

During the year, mining / excavation will be commenced in western end of graphite in Veir-Ias Quarry-1 along west-east direction as per the following details :

| Parameters | Quarry-1 |
|--|---|
| Height | 3m |
| Width | 6m |
| Bench slope angle | 15° |
| Quarry slope angle | 27° |
| Depth of quarry from surface level | 7m |
| Pit top level | RL 336m |
| Pit bottom level | RL 329m |
| Size of the quarry at the during the year | 110m X 54m |
| Area under excavation at the during the year | 5940m ² |
| Section considered | X-Y1 |
| Average thickness of excavation | 4m (OB) / 3m (Orc) |
| Average cross-sectional area of bench | 190m ² (OB) / 65m ² (Orc) |
| Average advance | 110m |
| R.L. of the benches at the end of the year | RL 329m, RL332m & RL335m |

➤ 2nd year Development

In this year, Quarry-1 developed in 1st year will be further developed laterally towards east. The development proposal is detailed as follows :

| Parameters | Quarry-1 |
|--|----------------------|
| Height | 3m |
| Width | 6m |
| Bench slope angle | 15° |
| Quarry slope angle | 27° |
| Depth of quarry from surface level | 7m |
| Pit top level | RL 335m |
| Pit bottom level | RL 328m |
| Size of the quarry at the during the year | 210m X 54m |
| Area under excavation at the during the year | 11,340m ² |

| | |
|---|---|
| Section considered | X2Y2 |
| Average thickness of excavation | 4m (OB) / 3m (Ore) |
| Average cross-sectional area of bench | 206m ² (OB) / 70m ² (Ore) |
| Average advance | 100m |
| S.L of the bench at the end of the year | RL 326m, RL331m & RL334m |

➤ 3rd year Development

During the year, Quarry-1 developed in 2nd year will be further developed laterally towards east along strike as per the following details :

| Parameters | Quarry-1 |
|--|---|
| Height | 3m |
| Width | 6m |
| Bench slope angle | 75 ^o |
| Quarry slope angle | 27 ^o |
| Depth of quarry from surface level | 7m |
| Pit top level | RL 334m |
| Pit bottom level | RL 327m |
| Size of the quarry at the during the year | 310m X 54m |
| Area under excavation at the during the year | 16,740m ² |
| Section considered | X3Y3 |
| Average thickness of excavation | 4m (OB) / 3m (Ore) |
| Average cross-sectional area of bench | 193m ² (OB) / 75m ² (Ore) |
| Average advance | 100m |
| R.L of the bench at the end of the year | RL 327m, RL330m & RL333m |

➤ 4th year Development

In this year, Quarry-1 developed in 4th year will be further developed laterally towards east. In addition to this, eastern end of Veln-I will be developed as Quarry-2. The development proposal is detailed as follows :

| Parameters | Quarry-1 | Quarry-2 |
|--|---|---|
| Height | 3m | 3m |
| Width | 6m | 6m |
| Bench slope angle | 75° | 75°-85° |
| Quarry slope angle | 27° | 27° |
| Depth of quarry from surface level | 7m | 7m |
| Pit top level | RL 332m | RL 335m |
| Pit bottom level | RL 325m | RL 328m |
| Size of the quarry at the during the year | 41.2 m X 54m | 60m X 38m |
| Area under excavation at the during the year | 22,248m ² | 2,200m ² |
| Section considered | X4Y4 | X1Y1 |
| Average thickness of excavation | 4m (OB) / 3m (Ore) | 4m (OB) / 3m (Ore) |
| Average cross sectional area of bench | 139m ² (OB) / 72m ² (Ore) | 140m ² (OB) / 14m ² (Ore) |
| Average advance | 102m | 60m |
| R.L of the bench at the end of the year | RL 329m, RL328m & RL331m | RL 328m, RL331m & RL334m |

➤ 5th year Development

During the year, Quarry-1 developed in 4th year and Quarry-2 developed in 1st year will be further developed laterally towards west as per the following details :

| Parameters | Quarry-1 | Quarry-2 |
|------------------------------------|----------|----------|
| Height | 3m | 3m |
| Width | 6m | 6m |
| Bench slope angle | 75° | 75°-85° |
| Quarry slope angle | 27° | 27° |
| Depth of quarry from surface level | 7m | 7m |
| Pit top level | RL 330m | RL 336m |
| Pit bottom level | RL 323m | RL 329m |

| | | |
|--|---|---|
| Size of the quarry at the during the year | 515m X 54m | 116m X 40m |
| Area under excavation at the during the year | 27,810m ² | 4,640m ² |
| Section considered | XSY5 | XZY2 |
| Average thickness of excavation | 4m (OB) / 3m (Ore) | 4m (OB) / 3m (Ore) |
| Average cross-sectional area of bench | 140m ² (OB) / 70m ² (Ore) | 195m ² (OB) / 18m ² (Ore) |
| Average advance | 103m | 56m |
| R.L of the bench at the end of the year | RL 323m, RL326m &
RL329m | RL 329m, RL332m
& RL335m |

3.B. In situ Tentative Excavation.

The mine is not opened so far. Therefore, recovery factors for beneficiable ore and sub-grade ore / mineral rejects have been assumed to be 0.90 and 0.1 respectively.

| Year | Pit no. | Total
Excavation
(m ³) | Top
Soil (m ³) | OB/SB/IB /
waste
(m ³) | ROM (m ³) | | ROM /
Waste
Ratio |
|--------------|--------------|--|-------------------------------|--|------------------------|-------------------------------------|-------------------------|
| | | | | | Ore (m ³)* | Mineral
reject (m ³) | |
| I | Quarry-1 | 31,440 | 5,940 | 20,300 | 4,680 | 520 | 1 : 3.9 |
| II | -do- | 33,000 | 5,400 | 24,000 | 5,040 | 560 | 1 : 3.9 |
| III | -do- | 32,700 | 5,400 | 20,800 | 5,400 | 600 | 1 : 3.5 |
| IV | Quarry-1 & 2 | 42,588 | 7,788 | 28,490 | 5,688 | 632 | 1 : 4.5 |
| V | -do- | 39,572 | 7,922 | 25,330 | 5,688 | 632 | 1 : 4.0 |
| Total | --- | 178,800 | 32,450 | 116,910 | 26,496 | 2,944 | 1 : 4.0 |

* Tentative tonnage of the ore may be arrived by computing approximate bulk density and recovery factor as these data are variable and may be established on time series.

3. C Land Degradation / Utilization: The extent of M.I area is 58.704 hectares. Out of these, 14.585 hectares non-forest land is privately owned which is restricted land and may not be utilized. Therefore, remaining 44.119 hectares consisting of 0.081 hectare Govt. non-forest waste land and 44.038 hectares forest land as per the land schedule will be utilized for mining and allied activities as given below :

| Sl. No. | Type of land use | As at present (ha) | As at the end of plan period (ha) | As at the end of Conceptual period (life of mine) (ha) |
|--------------|--|--------------------|-----------------------------------|--|
| 1. | Area under excavation | --- | 3.245 | 3.885 |
| 2. | Storage for Topsoil | --- | 0.927 | 0.927 |
| 3. | Overburden dump | --- | 2.338 | 2.338 |
| 4. | Mineral Storage | --- | 2.945 | 2.945 |
| 5. | Infrastructure (office, rest shelter, workshop, weigh-bridge etc.) | --- | 2.000 | 2.000 |
| 6. | Road | --- | 2.500 | 2.500 |
| 7. | Railways | --- | --- | --- |
| 8. | Tailing Pond | --- | 2.848 | 2.848 |
| 9. | Effluent Treatment Plant | --- | 0.064 | 0.064 |
| 10. | Mineral Separation Plant | --- | 2.136 | 2.136 |
| 11. | Township area | --- | --- | --- |
| 12. | Others | | | |
| | Water storage / reservoir | --- | 0.650 | 0.650 |
| | Rain water harvesting pond | --- | 0.900 | 0.900 |
| | Settling pond (4 nos.) | --- | 0.950 | 0.950 |
| --- | Sub-total | --- | 21.503 | 22.143 |
| 13. | 7.5m wide safety zone along M.L boundary | --- | 0.737 | 0.737 |
| 14. | 50m wide barrier along perennial nala bank | --- | 8.549 | 8.549 |
| 15. | Nala | --- | 1.073 | 1.073 |
| 16. | Barren area to be rehabilitated / planted | --- | --- | 11.617 |
| 16. | Remaining area | --- | 12.257 | --- |
| --- | Sub-total | --- | 22.616 | 21.976 |
| Total | --- | --- | 44.119 | 44.119 |

Safety zone is calculated to be 11.453 hectares consisting of 9.286 hectares forest land and 2.167 hectares non-forest land as detailed below:

| Safety zone | Forest land (ha) | Non-forest land (ha) | Total (ha) |
|---|------------------|----------------------|---------------|
| 50m wide safety zone along nala course (excluding safety zone along M.L boundary) | 8.549 | 0.651 | 9.200 |
| 7.5m wide safety zone along M.L boundary | 0.737 | 1.516 | 2.253 |
| Total | 9.286 | 2.167 | 11.453 |

3.D Afforestation and Reclamation/Rehabilitation :

Mined out area partly over 1 775 hectares in Quarry-1 will be reclaimed by way of back filling & plantation and remaining mined out area in Quarry-1 over 1,579 hectares as well as the entire mined out area of Quarry-2 over 0.531 hectare will be rehabilitated by way of water storage for irrigation purpose and other needs of nearby areas. Waste dump over 2.338 hectares will be rehabilitated entirely by way of plantation. Local species such as Mango, Jack fruit, Neem, Chakunda, Gambhari etc. will be planted on the waste dump and back-filled area as available nearby or as directed by the concerned Govt. authorities. A total of 62,540 saplings will be planted over an area of 25.016 hectares at 2m x 2m grid pattern conceptually as per the following table :

| Sl. No. | Type of Plantation | Area (ha) |
|---------|--|-----------|
| 1 | Reclamation of mined out area | 1.775 |
| 2 | Rehabilitation of waste dump | 2.338 |
| 3 | Rehabilitation of safety zone along M.L boundary | 0.700 |
| 4 | Rehabilitation of safety zone along perennial Sakata nala | 6.000 |
| 5 | Rehabilitation of barren area in the remaining forest land | 14.203 |
| Total | --- | 25.015 |

3.E Life of Mine:

As per the present status of exploration, graphite ore is expected up to a maximum depth of 10m from surface level. As far as grade of graphite ore, demand of finished ore and location of the beneficiation plant are concerned, the entire graphite ore up to 10m depth can be mined out economically. Ultimate pit limit has been delineated covering the entire graphite ore deposit up to 10m depth.

As abstracted, mineable resource of graphite ore is of the order of 134,736 t. During five yearly of plan period, 61,824t ore will be extracted. Remaining resource of 134,736 t – 61,824 t = 72,912 t will be extracted within a period of 5.49, say 6 years on the basis of 13,272 t / annum. Hence, life of the mine as on date is 11 years which is the sum of 5 years of plan period and 6 years, beyond the plan period.

However, rate of production as well as life of the mine may likely be changed in future depending upon the outcomes of proposed exploratory bore holes, method of working, market demand and statutory clearances.

4. Progressive Reclamation Plan:

The land to be degraded by way of mining / excavation conceptually and reclamation to be done against the land degradation are as follows:

| Land degradation / reclamation | As at the end of plan period (ha) | As at the end of conceptual period (ha) |
|--------------------------------|-----------------------------------|--|
| Land under Mining / excavation | 3.245 | 3.885 |
| Reclamation / rehabilitation | --- | 3.885 |

Reclamation will be done in the mined out area in two phases, i.e.

- Physical Reclamation,
- Biological Reclamation,

First phase is the process of **physical reclamation** that includes back filling, leveling, collection of stone chips and pitting.

During this plan period i.e. within 5 years from starting of Mining activities No quarry pit will be completely mined out for Graphite Ore. Hence during 1st 5 years no physical reclamation will be taken up. As per the approved mining plan Quarry pit / extent of reclamation as projected after conceptual period i.e. after 11th year is furnished below.

| Sl.No | Description | Area under excavation in Ha | Area to be reclaimed in ha | Balance area in ha | Utilization pattern |
|-----------------------|--------------|-----------------------------|----------------------------|--------------------|---------------------------------|
| Physical Reclamation. | | | | | |
| 1 | Quarry Pit-1 | 3.354 | 1.775 | 1.579 | To be maintained as water body. |
| 2 | Quarry Pit-2 | 0.531 | 00 | 0.531 | To be maintained as water body. |
| | Total | 3.885 | 1.775 | 2.11 | |

The next phase is **biological reclamation** which includes topsoil spreading, manuring, plantation, casual replacement, pruning etc.

Proposal has been given to plant 15,000 saplings over an area of 6 hectares within M.I area in safety zone of Sakata nala @2500 saplings / ha as per the following table :

| Year of plan | Location | No. of Saplings proposed | Spacing (m) | Area Earmarked (m ²) | Name of the saplings suggested |
|-----------------|----------------------------|--------------------------|-------------|----------------------------------|---|
| 1 st | safety zone of Sakata nala | 3000 | 2 | 12,000 | Teak, Mango, Jack-fruit, Neem, Chakunda, Gambhan, Cashew etc. |
| 2 nd | -do- | 3000 | 2 | 12,000 | -do- |
| 3 rd | do | 3000 | 2 | 12,000 | -do- |
| 4 th | do | 3000 | 2 | 12,000 | -do- |
| 5 th | do | 3000 | 2 | 12,000 | -do- |
| Total | --- | 15,000 | --- | 60,000 | --- |

Watering and manuring will be done periodically as per requirement. Post plantation care such as soil working, pruning etc. will be done. Casual replacement will be done effectively. Insecticides will be spread for pest control. Proper watch and ward will be there to save the trees from cattle and fire.

Besides the rehabilitation of Safety Zone of Saket Nalla as stated above, separate schemes has been prepared to cover dump surface / dump periphery by seed sowing & planting

The Mining plan is a dynamic document and changes from plan period to plan period at an interval of 5 years generally. Keeping this fact in view in stage I order vine condition no (xii), in case of change of Mining plan, the facts will be intimated to Regional Office, MoEF&CC, Bhubaneswar and necessary approval will be obtained. The reclamation of Mining pits etc if will be prescribed in the Mining Plan / Scheme, the corresponding annual progressive reclamation plan will be presented before the competent authority.

End: Conceptual Plan.



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

(B. Maharana OPS SB-I Rtd)

Dy. Conservator of Forests.

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



Signature of Project Proponent.



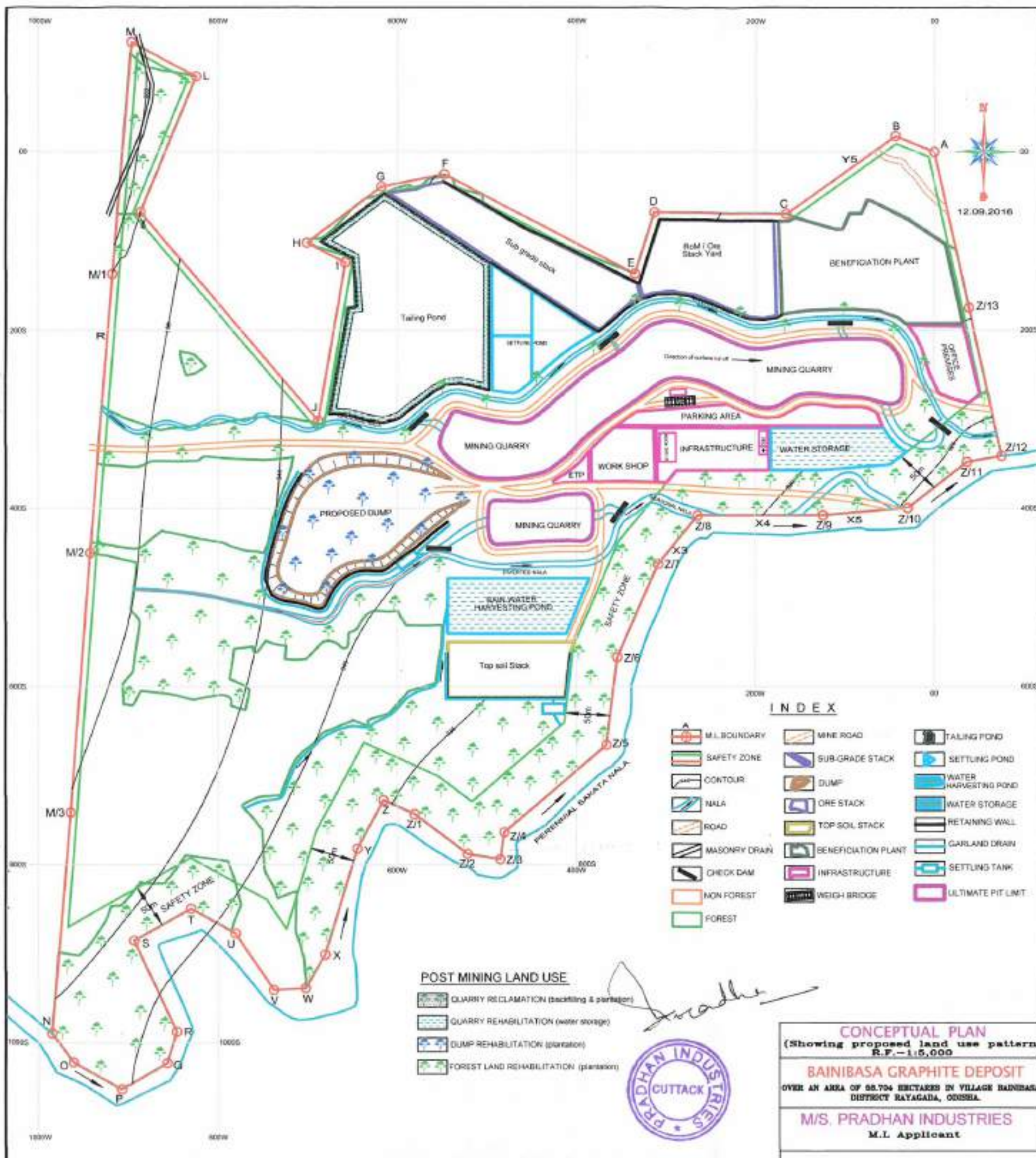
**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

The scheme is verified and found correct technically.

**Asst. Conservator of Forests
RCCF, Koraput Circle
KORAPUT**

Technically Approved.

**Regional Chief Conservator of Forests
KORAPUT CIRCLE**



Condition no. xiv(a) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

SCHEME FOR "MITIGATING MEASURE TO MINIMIZE SOIL EROSION AND CHOCKING OF STREAM PERTAINING TO DIVERSION OF 44.038 HA OF FOREST LAND WITHIN TOTAL ML AREA OF 58.704 HA IN BAINIBASA GRAPHITE MINING LEASE OF M/S PRADHAN INDUSTRIES IN RAYAGADA DISTRICT, ODISHA"

Revised Financial Outlay @ Rs 286.30 per Day.

| Sl No | Description | Nala-I | Nala-II | Total | Rate in Rs | Total amount required |
|------------------------------------|---|-------------|------------|-----------------------------|------------|-------------------------------------|
| 1 | Earthen channel & Bund construction (size: (2m+1m)/2 x 1m) | 787 m | 336m | 1123m = 1684.5 cum | 194.89 | 328292.21 |
| 2 | Stone packing / Check dam (20m long covering the entire surface facing the channel) | 4 | 2 | 6 = 1.15m*0.5m*20*6 =69 Cum | 714.45 | 49297.05 |
| 3 | Grass tufting 1.15x1123x2 | 1810.1 Sq m | 887.8 Sq m | 2582.9 sq m | 20.00 | 51658.00 |
| 4 | Vegetative Check dam | 0 | 5 no | 5 no | 1428.92 | 7144.60 |
| 5 | Plugging of Nala head by earthen bund | 0 | 400m | 400m=600 cum | 194.89 | 116934.00 |
| Total | | | | | | 553325.86 |
| Add 20% Excess for Cost escalation | | | | | | 110665.17 |
| G. Total | | | | | | 663991.03
Or Say Rs
6.64 Lakh |

(Rupees Six lakh Sixty Four thousand only)

Submitted:

[Signature]
USER AGENCY

[Signature]
DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Approved for Rs. 6,64,000/-
(Rupees Six lakh Sixty four thousand) only.



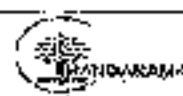
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IN RAYAGADA DISTRICT, ODISHA.**



Compliance to:

Condition no. xiv(a) of in-principle Approval order vide F.No.8-58/2017-FC

Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.



SCHEME TO MINIMIZE SOIL EROSION AND CHOKING OF STREAM INSIDE THE MINING LEASE AREA

1. INTRODUCTION.

Bainibasa Graphite Mining Lease over an area of 58.704ha at village Bainibasa under Muniguda Tahasil of Rayagada District has been granted by Steel & Mines Department, Government of Odisha vide No Proceedings No II (GR) SM-01/2017/379/SM Dated 10.01.2017 and lease deed has been executed on 11th January 2017. The ML area contains 44.038ha of Revenue Forest Land and lease has applied for approval u/s 2(ii) of the Forest (Conservation) Act, 1980 vide proposal No FP/OR/MIN/24824/2017. The MoEF&CC, New Delhi, Government of India has issued "In Principle Approval Order" vide F. No 8-58/2017-FC Dated 22nd January, 2018.

In the "In Principle Approval Order" a set of Stipulated conditions has been set out by the MoEF&CC, New Delhi for compliance before issue of Final Approval Order "Stage-II Order". The Condition (xiv) of Para-2 reads as follows.

- (xi) Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the Plan / Scheme shall be deposited in Ad-hoc CAMPA Account:
- a) *Mitigation 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 scheme.
 - 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.
 - d) Stabilize the over burden dumps by appropriate grading/ benching so as to ensure that the angle of repose at any given place is less than 28°; and
 - e) No damage shall be caused to the top soil and the user agency will follow the top soil management plan".



2. Present Scenario:

Bainibasa Graphite Mining project is a new project and after obtaining approval under Forest Conservation Act, 1980 and Environmental Clearance, mining activities will be taken up by the lease in accordance with the approved Mining Plan. The present Mining Plan has been approved by the Regional Controller of Mines, Bhubaneswar vide Order no MP/OTFM/20-ORI/BHU/2016-17/7097 dated 17.11.2016 for a period of 5 year from opening of the Mine.

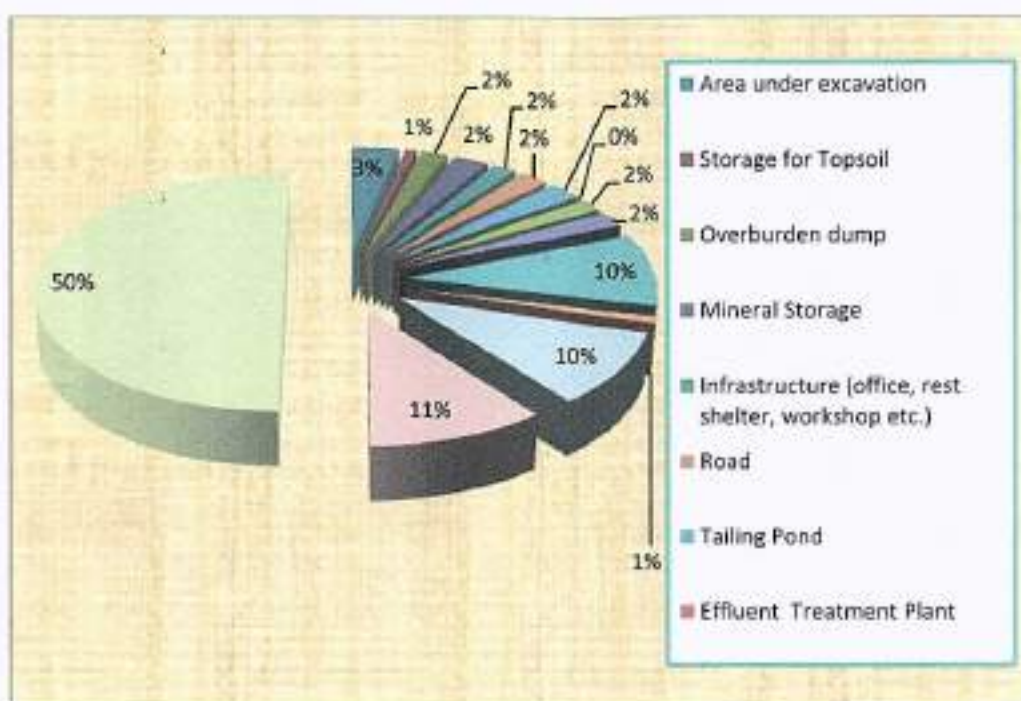
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|---------|--|----------------------------|--|---------------------|-------------------------|
| 1 | Area under excavation | | 3.885 | 3.885 | 0 |
| 2 | Storage for Topsoil | | 0.927 | 0.927 | 0 |
| 3 | Overburden dump | | 2.338 | 2.338 | 0 |
| 4 | Mineral Storage | | 2.945 | 2.945 | 0 |
| 5 | Infrastructure (office, rest shelter, workshop etc.) | | 2.000 | 2.000 | 0.000 |
| 6 | Road | | 2.5 | 2.5 | 0 |
| 7 | Railways | | --- | --- | -- |
| 8 | Tailing Pond | | 2.848 | 2.848 | 0 |
| 9 | Effluent Treatment Plant | | 0.064 | 0.064 | 0 |
| 10 | Mineral Separation Plant | | 2.136 | 2.136 | 0 |
| 11 | Township area | | --- | --- | --- |
| 12 | Others | Water storage / reservoir | 0.65 | 0.65 | 0 |
| | | Rain water harvesting pond | 0.9 | 0.9 | 0 |
| | | Settling pond (4 nos.) | 0.95 | 0.95 | 0 |
| — | Sub-total | | 22.143 | 22.143 | 0 |
| 13 | 7.5m wide safety zone along M.L boundary | | 2.253 | 0.737 | 1.516 |
| 14 | 50m wide barrier along perennial nala bank | | 9.2 | 8.549 | 0.651 |
| 15 | Nala | | 1.073 | 1.073 | 0 |



| | | | | |
|-----|---|---------------|---------------|---------------|
| 16 | Barren area to be rehabilitated / planted | 11.617 | 11.536 | 0.081 |
| 16 | Remaining area | --- | | |
| --- | Sub-total | 24.143 | 21.895 | 2.248 |
| | Total | 46.286 | 44.038 | 2.248 |
| | Non Forest land (un Touched) | 12.418 | 0 | 12.418 |
| | G. Total (ML Area) | 58.704 | 44.038 | 14.666 |



The User Agency has applied for grant of Environment Clearance vide Proposal No IA/OR/MIN/ 62694/ 2017 and Final presentation has been made before EAC (Non Coal Mining), MoEF&CC, New Delhi on 26.02.2018. The EC is awaited.

3. Drainage Pattern in ML area:

There is no perennial nala in the applied M.L area. The natural drainage system is distinct and dendritic in nature. Seasonal nala starts from the western side and passes through the M.L area along west-east direction. A perennial nala, namely Sakata nala starting from Niamagiri hill range flows outside the applied M.L area along the southern boundary from



west to east and joins with Vamsadhara Nadi in east. The confluence point of Sakata nala and Vamsadhara Nadi exists at a linear distance of 4 km due east.

There are two seasonal nala flowing across the ML area from West to East. The distance between two nala varies from 150 meter to 280 meter.

Description of Nala:

Nala-1: The Nala-1 is entering the ML area from west and joins with Sakat nala in the east flowing a distance of 1.156 Km. The width of the stream (Nala) is from 1 meter to 3 meter and depth varies from 1m to 4 meter.

This nala-1 carries runoff water from outside / inside the ML area.

Nala-2: The Nala-2 is originating within the ML area from Western side and flows towards East more or less parallel to Nala-1. This Nala carries runoff water of part of ML area coming within Nala-1 and part of area on Southern side.

4. Measures Suggested in the "In Principle Approval" & Scheme for its Compliance.

Condition No. (xii) (a) Mitigation 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.

5. Probable Source of Soil Erosion & Management:

In course of mining activities excavation will be taken up over an area of 3.245ha during 1st five year and during conceptual period the excavation will be taken up over 3.885 ha.

There will be three dumps i.e. Over burden Dump, Top soil dump, Mineral stock Yard (Sub Grade ore stack and Mineral stack.

Adequate management strategy has been prescribed in the mining plan to check soil erosion from these dumps. The management practices prescribed is as follows.



5(i) For Top Soil Management:

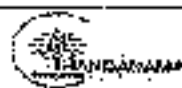
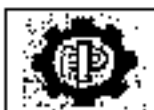
During the present approved Mining Plan excavation over an area of 3.245 ha has been suggested during 1st Five (5) year of working. The top soil @ 1m deep is likely to be generated. The total volume of Top soil to be generated is 32450 M³. At the end of Conceptual period total area under excavation is 3.885ha i.e. additional area of 0.640ha within the next plan period i.e. after 1st five year & within the life of the mine (11 year as predicted as per present exploration level) which will generate 6400 m³ of top soil. In the Approved Mining plan 0.927 hectare area has been earmarked for storage of top soil. The total quantum of top soil generation during 1st five years is 32450 cum. On stacking of the top soil, the probable height of dump will be $32450 / 9270 = 3.500$ meter. Dumping of top soil likely to be generated beyond the plan period is estimated to be 6400 m³ and dump height may increase by $6400/8000 = 0.8$ meter as 2nd terrace. The area marked as Top soil dump is of size 65mX 142.6m of rectangular size. There will be Catch Drain and retaining wall to prevent any sliding down of top soil dump and any soil / silt etc, if comes with runoff, it will be arrested through Catch drain and siltation tank provided.

5. (ii) For Mineral Storage Stack:

Graphite Ore Containing 3% FC content or above is considered as beneficiable ORE and taken to Mineral Storage stack. The Ore below 3% FC content is considered as sub grade and also stacked in the Mineral Storage yard and stacked separately. This sub grade ore afterwards blended with high grade ore and beneficiated in lean period depending on market demand. The annual production of Ore / Overburden / Sub grade ore during plan period is as furnished below. The sub grade ore will stacked over 16200 sq m (1.620 ha) and the volume of sub grade calculated to be 2944 cum. The average height of dump will be of $2944/16200 = 0.182$ meter

| Year | Plt.no. | Total
Excavation
(m ³) | Top
Soil (m ³) | OB/SB/OB /
waste
(m ³) | ROM (m ³) | | ROM /
Waste
Ratio |
|-------|--------------|--|-------------------------------|--|------------------------------------|-------------------------------------|-------------------------|
| | | | | | Ore (m ³) ^a | Mineral
reject (m ³) | |
| I | Quarry-1 | 31,440 | 5,940 | 20,300 | 4,680 | 520 | 1 : 3.9 |
| II | -do- | 33,000 | 5,400 | 22,000 | 5,040 | 560 | 1 : 3.9 |
| III | -do- | 32,200 | 5,400 | 20,800 | 5,400 | 600 | 1 : 3.5 |
| IV | Quarry-1 & 2 | 42,588 | 7,788 | 28,680 | 5,688 | 632 | 1 : 4.5 |
| V | -do- | 39,572 | 7,922 | 25,330 | 5,688 | 632 | 1 : 4.0 |
| Total | — | 178,800 | 32,450 | 116,910 | 26,496 | 2,944 | 1 : 4.0 |

Table 2 Annual production of Ore/Overburden / Sub grade ore furnished



For Mineral storage area catch drain and retaining wall provisions has been made in the mining plan to arrest any soil carried by the runoff.

5(iii) For Over Burden Dump.

The Over Burden likely to be generated during plan period is 1, 16,910 cum. The year wise position is furnished in the above table. The following Prescriptions for dump management have been provided in the Mining plan.

- The over burden will be stacked in the earmarked area covering an area of 2.338ha at average 5m height in one terrace of 7.5m height.
- The slope will be maintained at angle of Repose i.e. $37^{\circ} 30'$ with the horizon and over all slope will be maintained less than $<28^{\circ}$.
- Retaining wall (Toe wall) will be constructed all around the OB dump].
- Garland drain will be developed around waste dump outside the retaining wall to receive run-off water coming out of the retaining wall.
- Settling tank will be made to receive the run-off water from garland drain to settle the sediments and release clean water to Rain Water Harvesting Pond.
- The Size of Settling Tank is 20mx10mx5m
- Retaining wall will be made up of waste rock / boulders. Random Stones will be arranged as dry wall to retain the earth.
- Garland drain / Catch drain will be developed all along the lower side of the waste dump.

6. Velocity and Transportation of charged particles:

The carrying capacity of running water depends upon the velocity of water flow. As the water velocity is increased the discharge rises.

$$\text{Discharge [Q]} = \text{cross sectional area [A]} \times \text{Velocity [V]}$$

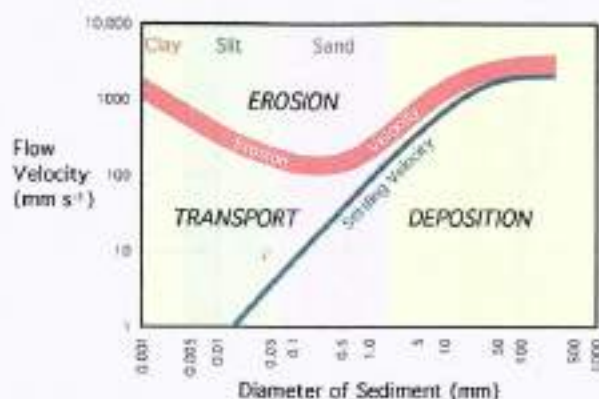
$(\text{m}^3/\text{sec}) \quad \quad \quad (\text{m}^2) \quad \quad \quad (\text{m/s})$

- The higher velocity enables the water channel to carry larger particles.
- The greater the volume of water flowing down a channel enables a greater load to be carried, so the capacity of the water channel to carry particles is increased.
- Transport requires much less energy than erosion.
- Once a particle is eroded from the channel bed, it can be carried a long distance even if velocity falls. Eventually velocity will be so slow that the particle is deposited.



- Small particles require disproportionately larger velocities to raise them from the channel bed. This is due to the cohesion (attraction) of the particles towards each other.
- The small particles lie on the channel bed, they offer less resistance to water flow than larger particles, and therefore need a more energetic stream to lift them.
- Velocity of flow determines the size and amount of material that can be transported.

The **critical entrainment velocity** curve suggests that particles below a certain size are just as resistant to entrainment as particles with larger sizes and masses. Fine silt and clay particles tend to have higher resistance to entrainment because of the strong cohesive bonds between particles. These forces are far stronger than the forces of friction and gravity.



This graph describes the relationship between stream flow velocity and particle erosion, transport, and deposition. The curved line labeled "erosion velocity" describes the velocity required to entrain particles from the stream's bed and banks.

With This Back Ground the scheme to Check Soil Erosion & Reduce Chocking of Nala is narrated / designed below.

7. Objectives.

The objectives of this scheme are

- To check soil erosion within the Lease area of 58.704 hectare including the OB Dump/ Top soil Dump & Sub Grade Dump.
- Arrest Silts in the runoff through Garland drains / Catch drains, Siltation tanks and water harvesting structures.



- Treat the nalla / drain to reduce outgoing of silts to Sakat Nala & then to river Vanshadhara.

8. Methodology adopted.

The Nala 1 and Nala-2 bed comes under Mineral zone and Both Quarry Pit No-I and II are on these nala. It is planned to divert the nala I & II by channelizing on the upper side of Nala-I & at the Lower side of Nala-II to facilitate mining activities within both the Nala. The Diverted nala after flowing 787meter from point of diversion will again join with its natural course and then meets Sakat nala

The Nala-II runs about 336meter from point of diversion to join its original course.

Now it is proposed to allow the flow of water without contamination / silt to sakat nala.

Nala-1:

There will be diversion channel of 2m wide at the top and 1.5m depth with an arc shape to carry the runoff water. The excavated earth will be put to form an embankment on northern side with 2 meter base and 1.0m height duly compacted. On point of turning of flow, there is a fear of scouring of Bank. Hence it is proposed to have stone packing on Embankment of 20m length and 0.5m thick. 4 such check dams / stone packed embankment site has been identified and marked on Map. On embankment, Grass tufting is suggested along with tree planting.

Nala-2:

Similarly there will be diversion channel of 2m wide at the top and 1.5m depth with an arc shape to carry the runoff water. The excavated earth will be put to form an embankment on Southern side with 2 meter base and 1.0m height duly compacted. On point of turning of flow, there is a fear of scouring of Bank. Hence it is proposed to have stone packing on Embankment of 20m length and 0.5m thick. 2 such check dams / stone packed embankment site has been identified and marked on Map. On embankment, Grass tufting is suggested along with tree planting. This nala is originating within the ML area. It is proposed to plug the Head of this nala by constructing an earthen bund along the head portion so as to check water entering the nala at head to reduce cutting effect of runoff water. The length of such U shaped bund is 200'm x2 meter. This bund will be grass tufted. On the nala bed towards head region vegetative check dams at an interval of 50 meter is



recommended so as to reduce the velocity of water and induce sedimentation of sand and heavy particles.

Summary of interventions proposed:

Table 3 Summary of intervention proposed

| Sl No | Description | Nala -1 | Nala-2 | Total |
|-------|---|-------------|-------------|-------------|
| 1 | Earthen channel & Bund construction (size: 2mx 1.5m) | 787 m | 336m | 1123m |
| 2 | Stone packing / Check dam (20m long covering the entire surface facing the channel) | 4 no | 2 no | 6 no |
| 3 | Grass tufting 1.12x1123x2 sq m | 1762.9 Sq m | 752.64 Sq m | 2515.54sq m |
| 4 | Vegetative Check dam | 0 | 5 no | 5 no |
| 5 | Plugging of Nala head by earthen bund | 0 | 400m | 400m |

9. Cost Estimate:

Table 4 Cost estimate

| Sl No | Description | Nala -I | Nala-II | Total | Rate in Rs | Total amount required |
|------------------------------------|---|-------------|-------------|----------------------------|------------|------------------------|
| 1 | Earthen channel & Bund construction (size: (2m+1m)/2 x 1m) | 787 m | 336m | 1123m = 1684.5 cum | 152.70 | 257223.2 |
| 2 | Stone packing / Check dam (20m long covering the entire surface facing the channel) | 4 | 2 | 6= 1.15m*0.5m*20*6 =69 Cum | 525.30/- | 36245.7 |
| 3 | Grass tufting 1.12x1123x2 | 1762.9 Sq m | 752.64 Sq m | 2515.54 sq m | 20 | 50310.8 |
| 4 | Vegetative Check dam | 0 | 5 no | 5 no | 1000 | 5000 |
| 5 | Plugging of Nala head by earthen bund | 0 | 400m | 400m=600 cum | 152.70 | 91620 |
| Total | | | | | | 440399.7 |
| Add 20% Excess for Cost escalation | | | | | | 88079.93 |
| G. Total | | | | | | 528479.63 or 5.284lakh |

Rs 5,28,500/-

(Rupees Five lakh Twenty Eight thousand ^{five} Four hundred only)

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

The scheme is verified and found correct technically.

Assoc. Conservator of Forests
O/o R.C.C.F., Koraput Circle

Technically approved for Rs. 5,28,500/-
(Rupees Five lakh twenty eight thousand five hundred only)

Regional Chief Conservator of Forests
KORAPUT CIRCLE



10. Phasing of Program.

In the condition itself, instruction has been issued to complete the work within three years from approval of Stage-II order. In accordance with the instructions, phasing of work has been designed

| Sl No | Description | Year of Execution | | | Total |
|-------|--|----------------------|----------------------|----------------------|---------|
| | | 1 st Year | 2 nd Year | 3 rd Year | |
| 1 | Earthen channel & Bund construction (size: 2mx 1.5m) Nala-1 | 787 | 0 | 0 | 787 m |
| | Earthen channel & Bund construction (size: 2mx 1.5m) Nala-2 | | | 336 | 336 m |
| 2 | Stone packing / Check dam (20m long covering the entire surface facing the channel) (Nala-1) | 4 | 0 | 0 | 4 |
| | Stone packing / Check dam (20m long covering the entire surface facing the channel) Nala 2 | 0 | 0 | 2 | 2 |
| 3 | Grass tufting | 1762.9
Sq m | | 752.64
Sq m | 2515.54 |
| 4 | Vegetative Check dam on Nala-2 | | | 5 | 5 |
| 5 | Plugging of Nala head by earthen bund Nala-2 | | | 200x2
FTI | 400 |

Table 5 Phasing programme



11. Implementing Agency.

This will be implemented by the User Agency under supervision & guidance of Environment Specialist & Range Officer, Muniguda.

12. Monitoring & Evaluation.

The Execution will be monitored by the Project Proponent & Reviewed by the Divisional Forest Officer, Rayagada periodically.

Encl: Map showing the Existing nala and diverted nala, earthen bund, along with Stone packing and vegetative Check dam.



"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.

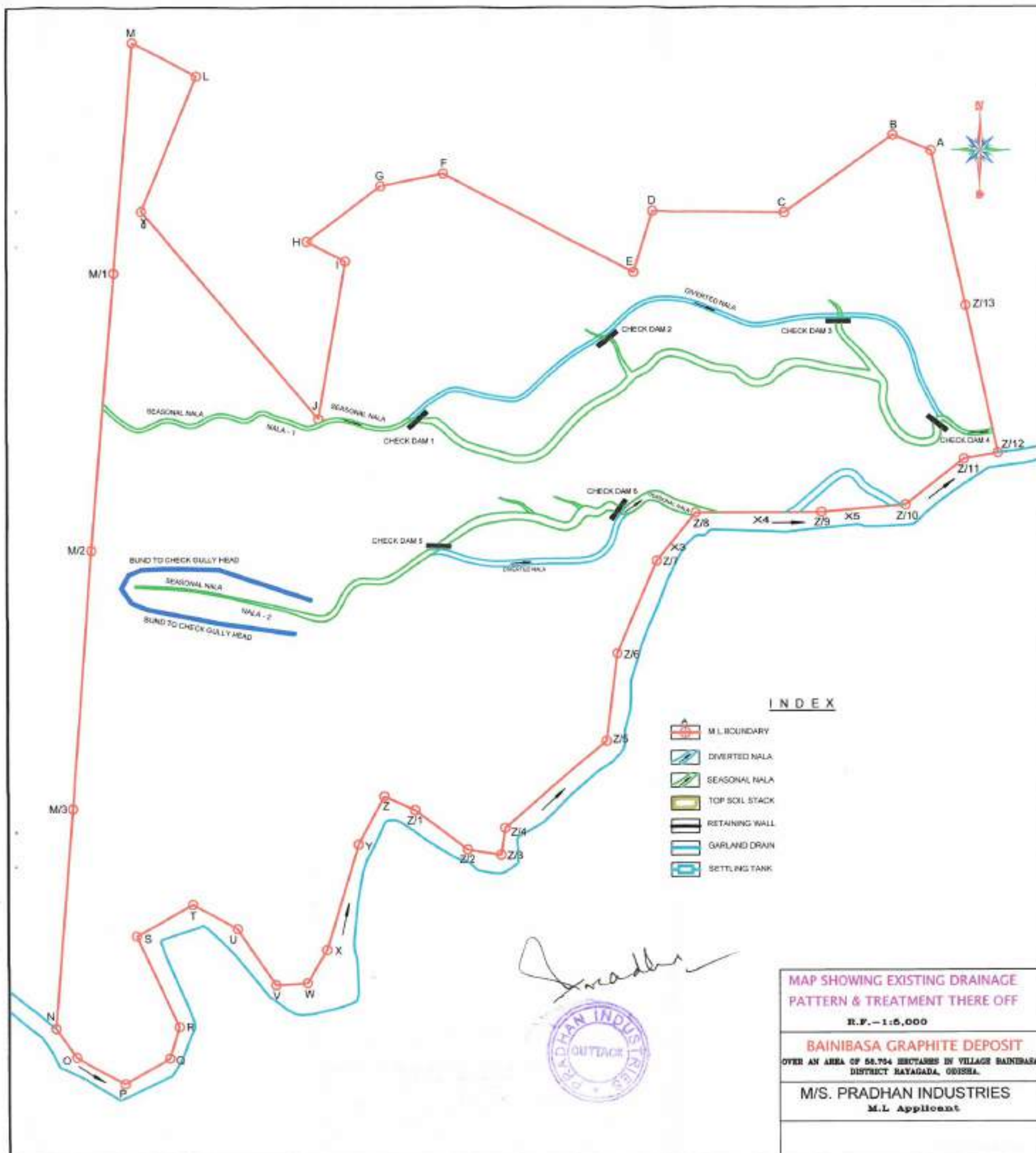
(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



Signature of Project Proponent.

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**



Condition no. xiv(b) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

SCHEME FOR "PLANTING OF ADEQUATE DROUGHT HARDY PLANT SPECIES AND SOWING OF SEEDS, IN THE APPROPRIATE AREA WITHIN THE MINING LEASE TO ARREST SOIL EROSION IN BAINIBASA GRAPHITE MINING LEASE OF M/S PRADHAN INDUSTRIES, DISTRICT RAYAGADA, ODISHA."

Revised Financial Outlay @ Rs 286.30 per Day.

Cost Estimate.

a. For Sowing / dibbling of seeds:

- Cost of seed Rs715/- kg. For 15 kg total cost of seed comes to Rs10725/- .It is to be completed within plan period i.e. 5 year.
- Cost for Broadcasting / dibbling @3 person days per Kg of seeds. Hence the cost of sowing comes to $15 \times 3 \times 286.30 = \text{Rs } 12883.50$ or Say 12884/-
- Total cost for Sowing / dibbling of seeds = Rs10725/- + 12884/- = Rs23609/-

b. Cost of Planting on dump toe, Embankment / Haul Road etc.

- As per the approved cost estimate the cost covering a period of 5 year (0th yr to 5th yr) is Rs1,41,146/- per 1600 plant (Annexure-I). As planting will be in small scale and on Benches / bonds an addition of 25% is recommended. Hence total cost for 1600 plants comes to Rs 176433/-
- For 6580 no of plants cost estimate comes to Rs 725580.70
- Total cost for Planting cost comes to Rs7,25,581/-

c. Total project outlay.

| Item of Work | Total projected amount in Rs. |
|------------------------------------|---------------------------------|
| a. Seed sowing & dibbling | 23609 |
| b. Planting on dump toe / benches. | 725581 |
| Sub Total | 749190 |
| Add. 20% for Cost escalation | 149838 |
| Total | 899028 or Say 8.991 Lakh |

(Rupees Eight Lakh Ninety Nine thousand & one hundred only)

Submitted:

[Signature]
USER AGENCY

[Signature]
DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Approved for Rs. 8,99,000/-
(Rupees Eight lakh Ninety nine thousand one hundred only)

[Signature]
Regional Chief Executive of Forests



SCHEME FOR

**PLANTING OF ADEQUATE DROUGHT HARDY PLANT SPECIES
AND SOWING OF SEEDS, IN THE APPROPRIATE AREA WITHIN
THE MINING LEASE TO ARREST SOIL EROSION
IN BAINIBASA GRAPHITE MINING LEASE OF
M/S PRADHAN INDUSTRIES, DISTRICT RAYAGADA, ODISHA.
(As it pertains to Diversion of 44.038ha of Forest Land)**



In compliance to:

***Condition no. xiv(b) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.***



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

1. INTRODUCTION.

In course of approval of diversion of forest land to an extent of 44.038 hectare coming within ML area of Bainibasa Graphite Mines, the MoEF & CC, Govt. of India Bhubaneswar in their "In principle approval" order F. No. 8-58/2017-FC, Dated 22nd January, 2018 have stipulated certain conditions for management of solid waste, top soil, checking of soil erosion etc. The condition reads as follows:

Condition No (xiv):

Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the plan / scheme shall be deposited in Ad-hoc CAMPA Account:

- a) *Mitigative measures to minimize soil erosion and choking of stream 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 scheme;*
- 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;*
- 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°; and*
- e) *No damage shall be caused to the top- soil and the user agency will follow the top soil management plan.*

NB: This scheme is to comply condition no (xiv) (b)

2. PRESENT SCENARIO:

The graphite mine at Bainibasa under Muniguda Tahasil of district Rayagada is a new project. The Project has been granted by the Steel & Mines department, Government of Odisha vide Proceedings No 379/SM dated 10.01.2017. The lease has been executed on



**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.**



11.01.2017. The Mining Plan has been approved vide order no MP/OTFM/20-ORI/BHU/2016-17/7097 Dated 17.11.2016 of Regional Controller of Mines, IBM, Bhubaneswar and valid for 5 years from date of operation of Mine.

2(a) The Mining Lease is over 58.704 ha. The land category and utilization pattern (Pre Mining) is as follows.

| Type of Land | | Kissam / Class of land
(as per land schedule) | Area | |
|--------------|-----------|--|--------|----------|
| | | | Acres | Hectares |
| Govt. land | AJA | Forest (Patra jungle) | 106.89 | 43.257 |
| | AAA | Forest (Bado jungle) | 1.93 | 0.781 |
| | AAA | Waste land (Pahad) | 0.20 | 0.081 |
| | Sub-total | --- | 109.02 | 44.119 |
| Private land | --- | Waste land (Dangar-2 & Dangar-3) | 36.04 | 14.585 |
| Total | --- | --- | 145.06 | 58.704 |

Table 1 Land category and utilization pattern

2.(b) The Approved Mining Plan envisages utilization of 44.038ha of Forest land and 0.081ha of Government Non Forest Land for mining and ancillary use. The proposed land utilization pattern during the Plan period / Conceptual period is as follows.

| Sl. No. | Type of land use | Present Land Use (ha) | As at the end of scheme period (ha) | As at the end of Conceptual period (life of mine) (ha) |
|---------|--|-----------------------|-------------------------------------|--|
| 1. | Area under excavation | --- | 3.245 | 3.885 |
| 2. | Storage for Topsoil | --- | 0.927 | 0.927 |
| 3. | Overburden dump | --- | 2.338 | 2.338 |
| 4. | Mineral Storage | --- | 2.945 | 2.945 |
| 5. | Infrastructure (office, rest shelter, workshop etc.) | --- | 2.000 | 2.000 |
| 6. | Road | --- | 2.500 | 2.500 |
| 7. | Railways | --- | --- | --- |
| 8. | Tailing Pond | --- | 2.848 | 2.848 |
| 9. | Effluent Treatment Plant | --- | 0.064 | 0.064 |

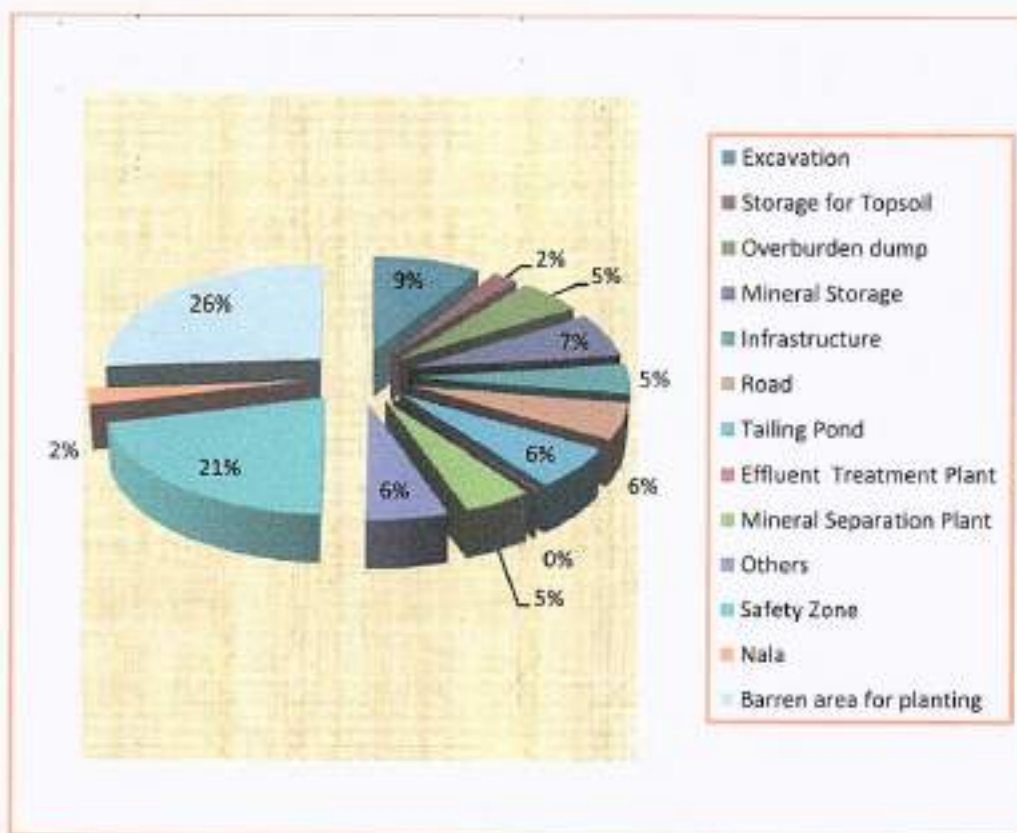


**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.**



| | | | | |
|--------------|--|----------------------------|---------------|---------------|
| 10. | Mineral Separation Plant | --- | 2.136 | 2.136 |
| 11. | Township area | --- | --- | --- |
| 12. | Others | Water storage / reservoir | 0.650 | 0.650 |
| | | Rain water harvesting pond | 0.900 | 0.900 |
| | | Settling pond (4 nos.) | 0.950 | 0.950 |
| --- | Sub-total | --- | 21.503 | 22.143 |
| 13. | 7.5m wide safety zone along M.L boundary | --- | 0.737 | 0.737 |
| 14. | 50m wide barrier along perennial nala bank | --- | 8.549 | 8.549 |
| 15. | Nala | --- | 1.073 | 1.073 |
| 16. | Barren area to be rehabilitated / planted | --- | --- | 11.617 |
| 17. | Remaining area | --- | 12.257 | --- |
| --- | Sub-total | --- | 22.616 | 21.976 |
| Total | --- | --- | 44.119 | 44.119 |

Table 2 Proposed land use pattern during the plan period





Condition No (xiv) (b) has stressed on "*Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion*".

On examining the mining plan, land utilization pattern and future exploration for expansion mining activities in subsequent mining schemes, it is felt that stabilization of dumps through sowing & planting, planting of trees on both sides of Haul Road, Tailing pond Boundary, Diverted nalla embankment, Rain harvesting pond embankment are the suitable available sites for planting through which soil erosion can be reduced substantially. The other portions of lease area will either remain under active mining, future exploration or not to be touched for any activities.

3. Salient points of waste management (as prescribed in the Mining Plan.)

In the Approved Mining Plan there is prescription about 3 dumps i.e.

- Overburden Dump,
- Mineral Storage stack,
- Top Soil dump,

The area assigned for each dump is as follows.

| Sl No | Description | Area in Ha |
|-------|-----------------------|--------------|
| 1 | Overburden Dump | 2.338 |
| 2 | Mineral storage stack | 2.945 |
| 3 | Top Soil dump | 0.927 |
| | Total | 6.210 |

Table 3 Area assigned for each dump

Out of three dumps stated above, the Mineral storage yard will receive Ore and same will be transported to Mineral separation plant within 2 / 3 months. Out of 2.945ha area assigned for Mineral storage stack, 1.620 ha is assigned for sub grade ore stack. The quantum of Sub grade that will be generated during plan period i.e. 2944 cum. The average height of sub grade ore will likely to be 0.18m ($2944 / 16200 = 0.18m$) As the storage period of RDM is less it's sliding down is remote. The Top soil dump will remain for a longer period and its stabilization / management has been dealt in a separate scheme for Condition no (xiv) (e).



**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.**



3A. Exploration for Minerals:

In the approved Mining plan under Para 4.9 there is a provision to cover the entire area under exploration by way of core drilling to quantify reserves / resources of graphite ore up to the end of graphite mineralization under UMFC code 111 & 122 with cut off grade corresponding to threshold value suggested by IBM. The area now mentioned as barren area to be rehabilitated may contain ore and may be put to mining activities.

3B. Area available to be covered under sowing & planting of hardy species:

Under this scheme area that can be covered are

| Sl No | Description | Area in Ha | Number of plants to be planted | Remark |
|-------|--|--|--------------------------------|--|
| 1 | OB Dump | 2.338 | 3000 | |
| 2 | Top soil stack | 0.927 | | Already covered under Condition no air (e) |
| 3 | Sub grade ore stack / Mineral storage area boundary | 7.945 | 1000 | |
| 4 | Diverted nala boundary / embankment | (787m + 335 m)
= 1.123m = 2.25 RKM @ 200 plants per RKM | 450 | |
| 5 | Rain water harvesting Pond Periphery | 0.420 RKM @ 200 plants per RKM | 85 | |
| 6 | Green belting around Beneficiation Plant | 0.490ha | 1000 | |
| 7 | Along the Haul Road (Both Sides) Length 2.512 km x 2 = 5.024 RKM | 5.024 RKM @ 200 plants per RKM | 1005 | |
| | Total | 6.70 ha + 7.894 RKM | 5580 | |

Table 4 Area available to be covered under sowing & planting of hardy species

Excluding the Top soil stack for which separate scheme has been prepared the area available for planting / sowing of seeds is $(6.70 - 0.927) = 5.773$ ha and 7.894 RKM

(There are separate schemes for planting in Safety Zone, Green Belt along the Sakat Nala)



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

In the "In Principle approval" order it is suggested for *Planting of adequate drought hardy plant species and sowing of seeds in the appropriate area within mining lease to arrest soil erosion.*

5.(a) Topography of the ML area:

Applied M.L area represents a mild sloping topography as well as plain land bisected by the seasonal nalas flowing along west-east. General slope of the area is due east. The highest and lowest altitudes are at 361mRL and 334mRL. The elevation difference is $361 - 334 = 27\text{m}$.

(b) Soil.

Soil with alluvium is seen on the surface in the entire M.L area excluding nala course.

(c) Climate.

The Bainibasa M.L area in Rayagada district experiences an extreme type of climate with hot & dry summer (Preferably in April - May) and very cold in winter (In December and January). Average rain fall recorded for the area is around 1400mm. Humidity in the area varies from 40% to 90%.

(d) Drainage.

There is no perennial nala in the applied M.L area. The natural drainage system is distinct and dendritic in nature. Seasonal nala starts from the western side and passes through the M.L area along west-east direction. A perennial nala, namely Sakata nala starting from Niamagiri hill range flows outside the applied M.L area along the southern boundary from west to east and joins with Varnsadhara Nadi in east. The confluence point of Sakata nala and Varnsadhara Nadi exists at a linear distance of 4 km due east.

6. Objectives:

The objectives of the scheme is to

- Cover the blank / exposed surface with grass / tree / vegetation.



- Check soil erosion to maximum extent within the ML area so that the natural water courses not silted up.
- Check Water pollution / contamination by all possible measures.

7. Method to be adopted.

A. Seeds to be sown.

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



Seeds to be sown.

- (a) Bombax ceiba (Simili)
- (b) Azadirachta indica (Neem)
- (c) Acacia auriculiformis (Suna jhari)
- (d) Cassia siamensis (san-Chakunda)
- (e) Ziziphus mauritiana (bar koli)

| <i>Name of species</i> | <i>Quantity to be sown in Kg.</i> | <i>% in the Mixture</i> |
|-------------------------------------|-----------------------------------|-------------------------|
| Bombax ceiba, (Simili) | 2 | 13.3 |
| Azadirachta indica, (Neem) | 5 | 33.4 |
| Acacia auriculiformis, (Suna jhari) | 3 | 20 |
| Cassia siamensis, (san- Chakunda) | 3 | 20 |
| Ziziphus mauritiana, (bar koli) | 2 | 13.3 |
| Total: | 15 | 100 |

B. Method of sowing / time:

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

C. 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. Tree species to be selected for planting are



**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA**



- i. Bombax ceiba, (Simli)
- ii. Erythrina suberosa, (Paladhua)
- iii. Azadirachta indica, (Neem)
- iv. Acacia eucalyptiformis, (Surajnan)
- v. Cassia siamea, (sari Chakunda)
- vi. Zyziphus mauritiana, (bar koli)

As it is recommended to plant along the dump periphery (Toe area) / nalla bank it is suggested to plant over 1520 each year in the area specified above. (7600/5= 1520 number)

D. 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 May and planting will be done during June after break of monsoon and application of CDM. Post care will be taken as per prevailing practice.

E. Cost Estimate.

a. For Sowing / dibbling of seeds:

- i. Cost of seed Rs550/- kg. For 15 kg total cost of seed comes to Rs8250/- .It is to be completed within plan period i.e. 5 year.
- ii. Cost for Broadcasting / dibbling @3 person days per Kg of seeds. Hence the cost of sowing comes to 15x3x224.30= Rs 10093.5 or say 10094/-
- iii. Total cost for Sowing / dibbling of seeds =Rs8250/-+ 10094/- =Rs18344/-

b. Cost of Planting on dump toe, Embankment / Haul Road etc.

- i. As per the approved cost estimate the cost covering a period of 5 year (0th yr to 5th yr) is Rs104607/- per 1600 plant (Annexure-I). As planting will be in small scale and on Benches / bonds an addition of 25% is recommended. Hence total cost for 1600 plants comes to Rs 130759/-
- ii. For 6580 no of plants cost estimate comes to Rs 537746.40 or say 537746/-
- iii. Total cost for Planting cost comes to Rs537746/-

c. Total project outlay.

| Item of Work | Total projected amount in Rs |
|------------------------------------|------------------------------|
| a. Seed sowing & dibbling | 18344 |
| b. Planting on dump toe / benches. | 537746 |
| Sub Total | 556090 |



**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.**



| | |
|-------------------------------------|-----------------|
| Add. 20% for Cost escalation | 111218 |
| Total | 667308/- |

Table 5 Total project outlay

Total cost for implementation of project (Sowing & Planting) is projected at Rs 667308/- or Say 6.673 lakh

(Rupees Six lakh Sixty Seven thousand Three Hundred only.)

8. Phasing of Programme.

The entire work is to be completed in five years. The phased out work programme is as follows.

| Work Description | Year | | | | | |
|------------------|--|---|---------------------------------|---------------------------------|--|------------|
| | 1 st yr
(2019-20) | 2 nd yr
(2020-21) | 3 rd yr
(2021-22) | 4 th yr
(2022-23) | 5 th yr
(2023-24) | |
| Sowing of Seeds | 3kg On Tailing pond / Embankment | 3kg On Dumps / Embankment | 3kg On Dumps / Embankment | 3kg On Dumps / Embankment | 3kg On Dumps / Embankment / vacant places | 15 kg seed |
| Planting | 1520 no plant Haul Road / Dump periphery | 1520 no plant Haul Road / Plant green belt / Dump | 1520 no plant Dump / embankment | 1520 no plant Dump / embankment | 1520 no plant Dump / embankment / Ore stack. | 7600 plant |

Table 6 Phasing programme

9. Implementing Agency.

The work will be executed by the User agency under supervision of Mining Advisor & Forest Advisor of the Firm.

10. Monitoring & Evaluation.

The implementation & its maintenance will be evaluated by the authority of the User Agency regularly. The survival percentages along with height growth are to be monitored regularly. Reporting is to be yearly to DFO, Rayagada for his information & suggestion if any.

Encl:

- Annexure-I;
- Map showing Dumps, Haul Road, Nalla embankment, Rain water harvesting pond embankment, Benifiation plat Green belt area.

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

*Technically approved for Rs 6,67,308/-
(Rupees Six lakh Sixty seven thousand three hundred only)*

The scheme is verified and found correct technically.

**Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle
KORAPUT**

**Regional Chief Conservator of Forests
KORAPUT CIRCLE**



SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.



"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.

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



Signature of Project Proponent.

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION





**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN RAINIBASA GRAPHITE MINING LEASE AREA.**



Annexure-I

Cost Norm For Block plantation (@1600 Plants per Hectare)

For ten year maintenance.

Wage rate- @Rs224.30/-

| Sl. No | Item of Work | Preferable Period of Execution | Person days | Labour cost @Rs 224.30/- per day | Material (Rs) | Total (Rs) |
|--|--|--------------------------------|-------------|----------------------------------|---------------|----------------|
| 0th Year (Advance Work) | | | | | | |
| 1 | Survey, Demarcation and Pillar Putting. | Nov / Dec | 2 | 448.6 | 0 | 448.6 |
| 2 | Site Preparation | Nov / Dec | 8 | 1794.4 | 0 | 1794.4 |
| 3 | Alignment & Staking of pits. | Jan / Feb | 2 | 448.6 | 0 | 448.6 |
| 4 | Digging of pits (30cm cubic) | Feb / March | 40 | 8972 | 0 | 8972 |
| 5 | Nursery Cost (6 month old seedling) Part @10.16p/seedling (Rs7.08p in 1 st yr -Rs3.08p in 1 st year) for 1760seedlings (1600*160) | Jan / March | 41 | 9200.2 | 2939 | 12139.2 |
| | Sub Total | | 96 | 21552.8 | 2939 | 24491.8 |
| 1st Year / Planting Year | | | | | | |
| 6 | Nursery Cost (6 month old seedling) Balance @3.08p for 1760 seedling | Apr-July | 21.5 | 4822.45 | 593 | 5415.45 |
| 7 | Carriage and planting Casualty replacement and application of insecticide, manure etc | July / Aug | 21 | 4710.3 | 0 | 4710.3 |
| 8 | Cost of Insecticide & Fertilizer.
(a) NPK @50gm/ plant as basal dose-80kg @Rs24/- per Kg : Rs1920/-
(b) Urea 70gm per plant in two subsequent doses@5/- per kgRs350/-
(c) Granular insecticides (Thimet, Forast, etc @5gm/ plant@Rs80/kg -Rs640/- | | | 0 | 3232 | 3232 |
| 9 | 1 st Weeding (Complete weeding) | Aug / Sept | 7 | 1570.1 | 0 | 1570.1 |
| 10 | Manuring of urea 30gm/ plant | Aug / Sept | 5 | 1121.5 | 0 | 1121.5 |
| 11 | 2 nd Weeding (Complete weeding) | Sept / Oct | 5 | 1121.5 | 0 | 1121.5 |
| 12 | Soil Working(50cm Radius around plant) manuring 35g/ plant | Sept/ Oct | 7 | 1570.1 | 0 | 1570.1 |



**SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN BAINIBASA GRAPHITE MINING LEASE AREA.**



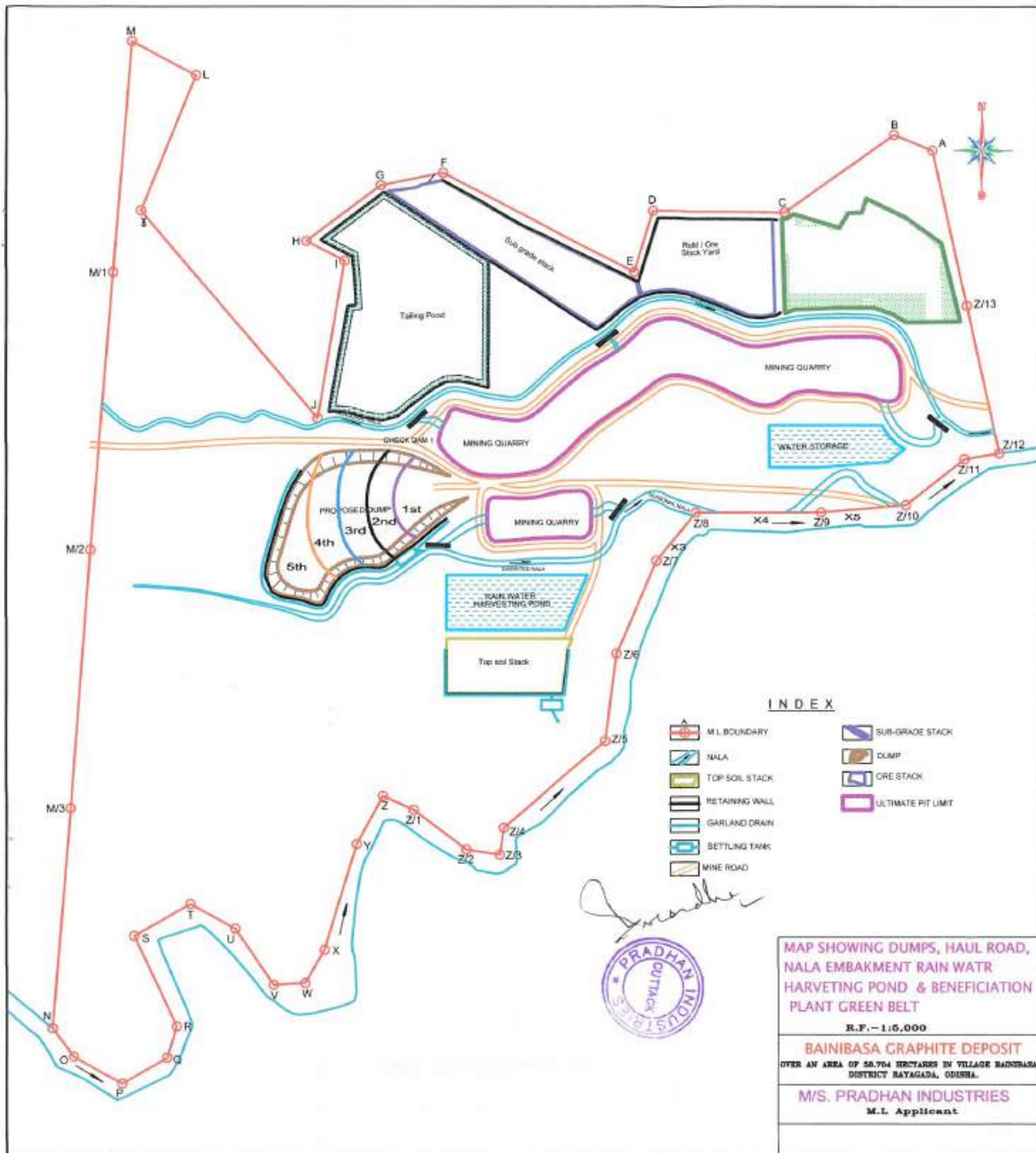
| | | | | | | |
|--|---|-----------------|--------------|-----------------|--------------|-----------------|
| 16 | Watering of Plants | Summer & Winter | 40 | 8972 | 500 | 9472 |
| | Sub Total | | 106.5 | 23887.95 | 4325 | 28212.95 |
| 2nd Year Maintenance | | | | | | |
| 16 | Casualty Replacement (10%) with nursery cost | July / Aug | 4 | 897.2 | 1512 | 2409.2 |
| 17 | weeding (Complete weeding) | Sep/Oct | 6 | 1345.8 | 0 | 1345.8 |
| 18 | Cost of Fertilizer @NPK 70g/ plant (Rs24.00 per Kg & insecticides @5g/ plant for 160 plants 800 gm @Rs80/- per Kg | | 0 | 0 | 2752 | 2752 |
| 19 | Soil working 50bm Radius around Plant | Oct / Nov | 7 | 1570.1 | 0 | 1570.1 |
| 20 | Application of Fertilizer & insecticides, | Sept/ Oct | 4 | 897.2 | 0 | 897.2 |
| 21 | Watering of Plants | Summer & Winter | 40 | 8972 | 500 | 9472 |
| | Sub Total | | 61 | 13682.3 | 4764 | 18446.3 |
| 3rd Year maintenance | | | | | | |
| 22 | Weeding and application of fertilizer | Aug / Sept | 7 | 1570.1 | 0 | 1570.1 |
| 23 | Cost of fertilizer. NPK @50g/ plant @Rs24/- per Kg | | | 0 | 1920 | 1920 |
| 24 | Soil Working(50cm Radius around plant) | Oct / Nov | 7 | 1570.1 | 0 | 1570.1 |
| 25 | Watering of Plants | Summer & Winter | 40 | 8972 | 500 | 9472 |
| | Sub Total | | 54 | 12112.2 | 2420 | 14532.2 |
| 4th Year maintenance | | | | | | |
| 26 | Watering of Plants | Summer & Winter | 40 | 8972 | 500 | 9472 |
| | Sub Total | | 40 | 8972 | 500 | 9472 |
| 5th Year maintenance | | | | | | |
| 27 | Watering of Plants | Summer & Winter | 40 | 8972 | 500 | 9472 |
| | Sub Total | | 40 | 8972 | 500 | 9472 |
| | Grand Total | | 397.5 | 89159.25 | 15448 | 104607.3 |



SCHEME FOR CHECKING SOIL EROSION BY SOWING & PLANTING
IN KANIHASA GRAPHITE MINING LEASE AREA



| ABSTRACT | | | | |
|----------|-------|----------|-------|-------------------------|
| 0th Year | 96 | 21532.8 | 2939 | 24471.8 |
| 1st Year | 106.5 | 23887.95 | 4325 | 28212.95 |
| 2nd Year | 61 | 13682.3 | 4764 | 18446.3 |
| 3rd year | 54 | 12112.2 | 7420 | 14532.2 |
| 4th Year | 40 | 8972 | 500 | 9472 |
| 5th year | 40 | 8972 | 500 | 9472 |
| Total | 397.5 | 89159.25 | 15448 | 104607.3 or
104607/- |



Annexure - D(1)

Condition no. xiv(c) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

SCHEME FOR "CONSTRUCTION OF CHECK DAMS, RETENTION / TOE WALLS TO ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG THE CONTOUR IN BAINIBASA GRAPHITE MINING LEASE OF M/S PRADHAN INDUSTRIES, IN RAYAGADA DISTRICT, ODISHA."

Revised Financial Outlay @ Rs 286.30 per Day.

Estimate for 100 meter:

Earth Work for Foundation: $2\text{m} \times 0.5\text{m} \times 100 = 100\text{cum}$ @194.89 per cum =Rs 19489/-

RR Stone dry walling: Foundation: $2\text{m} \times 0.5\text{m} \times 100 = 100\text{cum}$

Super structure: $2\text{m} \times 1.5\text{m} \times 100 = 300\text{cum}$

Total 400 cum @ 714.45 = 2,85,780/-

| Financial provisions for Execution of Prescription. | | | | | | |
|---|---|----------------------|----------------------------------|----------------|---------------------|-------------------|
| Sl No | Category of Work | Quantum of work | | Total in meter | Rate for 100 m / no | Amount in Lakh Rs |
| | | For OB Dump in meter | For Sub Grade Ore Stack in meter | | | |
| 1 | Retaining Wall | | | | | |
| a | Foundation Earth Work) | 385 | 925 | 1310 | 19489 | 2.553 |
| b | RR Stone Masonry | 385 | 925 | 1310 | 285780 | 37.437 |
| 2 | Bottom Garland Trench / Catch drain | 400 | 0 | 400 | 19489 | 0.780 |
| 3 | Settling Tank (Size= 20x10x5 mt=1000 cum) | 1 no | 0 | 1 no | 194890 | 1.949 |
| | Sub Total | | | | | 42.719 |
| 4 | Repair & maintenance | | | | 10% of above cost | 4.271 |
| | Total | | | | | 46.99 |
| | Add 20% excess for Cost escalation | | | | | 9.398 |
| | G. Total | | | | | 56.388 |

(Rupees Fifty Six lakh Thirty Eight Thousand & Eight Hundred only)

Submitted

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

Approved for Rs. 56,38,800/-
(Rupees Fifty Six lakh Thirty eight thousand eight hundred only)

Rayagada District

USER AGENCY



SCHEME FOR

**CONSTRUCTION OF CHECK DAMS, RETENTION / TOE WALLS TO
ARREST SLIDING DOWN OF THE EXCAVATED MATERIAL ALONG
THE CONTOUR IN BAINIBASA GRAPHITE MINING LEASE OF
M/S PRADHAN INDUSTRIES, IN RAYAGADA DISTRICT, ODISHA.**

(As it pertains to Diversion of 44.038ha of Forest land)



Compliance to:

**Condition no. xiv(c) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.**



Scheme to arrest sliding down of excavated earth at Bainibasa Graphite Mine of M/s Pradhan Industries.

1. INTRODUCTION.

In course of approval of diversion of forest land to an extent of 44.038 hectare coming within ML area of Bainibasa Graphite Mines, the MoEF & CC, Govt. of India Bhubaneswar in their "In principle approval" order F. No. 8-58/2017-FC, Dated 22nd January, 2018 have stipulated certain conditions for management of solid waste, top soil, checking of soil erosion etc. The condition reads as follows:

Condition No (xiv):

Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the plan / scheme shall be deposited in Ad-hoc CAMPA Account:

- (a) *Mitigative measures to minimize soil erosion and choking of stream 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 scheme;*
- (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;*
- (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°; and*
- (e) *No damage shall be caused to the top- soil and the user agency will follow the top soil management plan.*

2. PRESENT SCENARIO:

The graphite mine at Bainibasa under Muniguda Tahasil of district Rayagada is a new project. The Project has been granted by the Steel & Mines department, Government of Odisha vide Proceedings No 379/SM dated 10.01.2017. The lease has been executed on 11.01.2017. The Mining Plan has been approved vide order no MP/OTFM/20-ORI/BHU/2016-17/7097 Dated 17.11.2016 of Regional Controller of Mines, IBM, Bhubaneswar and valid for 5 years from date of operation of Mine.

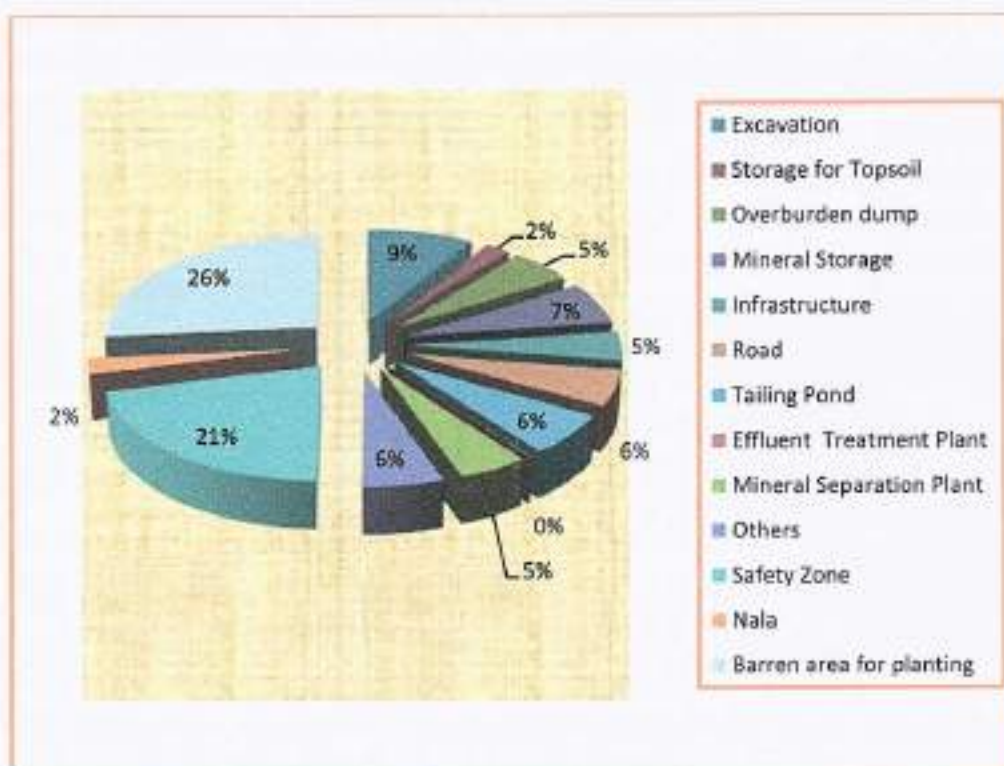


**SCHEME TO ARREST SLIDING DOWN OF EXCAVATED EARTH AT
BAINIBASA GRAPHITE MINE of M/s PRADHAN INDUSTRIES.**



| | | | | |
|--------------|--|-----|---------------|---------------|
| --- | Sub-total | --- | 21.503 | 22.143 |
| 13. | 7.5m wide safety zone along M.L boundary | --- | 0.737 | 0.737 |
| 14. | 50m wide barrier along perennial nala bank | --- | 8.549 | 8.549 |
| 15. | Nala | --- | 1.073 | 1.073 |
| 16. | Barren area to be rehabilitated / planted | --- | --- | 11.617 |
| 17. | Remaining area | --- | 12.257 | --- |
| --- | Sub-total | --- | 22.616 | 21.976 |
| Total | --- | --- | 44.119 | 44.119 |

Table 2 Proposed land use pattern



Condition No (xiv) (c) has stressed on ***“Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour”***. On examining the current Mining Plan and the land use pattern it is observed that land to be covered under Over Burden Dump is 2.338ha within 1st Five Years and also at Conceptual Stage.



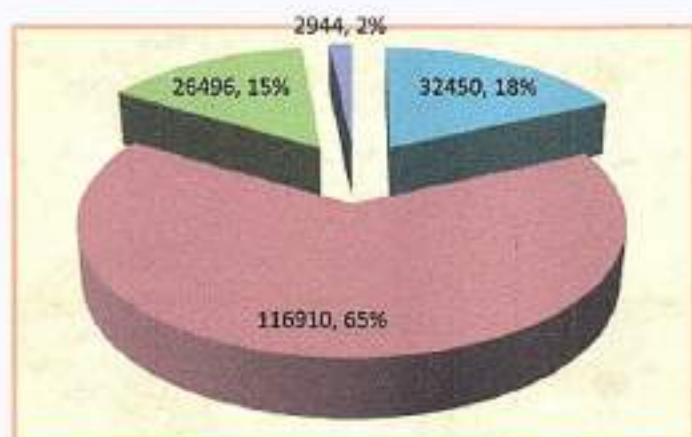
height may increase by $6400/8000 = 0.8$ meter as 2nd terrace. The area marked as Top soil dump is of size 65mX 142.6m of rectangular size.

3A (ii) Mineral Storage Stack:

Graphite Ore Containing 3% FC content or above is considered as beneficiable ORE and taken to Mineral Storage stack. The Ore below 3% FC content is considered as sub grade and also stacked in the Mineral Storage yard and stacked separately. This sub grade ore afterwards blended with high grade ore and beneficiated in lean period depending on market demand. The annual production of Ore / Overburden / Sub grade ore during plan period is as furnished below. The sub grade ore will stacked over 16200 sq m (1.620 ha) and the volume of sub grade calculated to be 2944 cum. The average height of dump will be of $2944/16200 = 0.182$ meter

| Year | Pit no. | Total Excavation (m ³) | Top Soil (m ³) | OB/SB/IB / waste (m ³) | ROM (m ³) | | ROM / Waste Ratio |
|-------|--------------|------------------------------------|----------------------------|------------------------------------|------------------------|----------------------------------|-------------------|
| | | | | | Ore (m ³)* | Mineral reject (m ³) | |
| I | Quarry-1 | 31,440 | 5,940 | 20,300 | 4,680 | 520 | 1 : 3.9 |
| II | -do- | 33,000 | 5,400 | 22,000 | 5,040 | 560 | 1 : 3.9 |
| III | -do- | 32,200 | 5,400 | 20,800 | 5,400 | 600 | 1 : 3.5 |
| IV | Quarry-1 & 2 | 42,588 | 7,788 | 28,480 | 5,688 | 632 | 1 : 4.5 |
| V | -do- | 39,572 | 7,922 | 25,330 | 5,688 | 632 | 1 : 4.0 |
| Total | --- | 178,800 | 32,450 | 116,910 | 26,496 | 2,944 | 1 : 4.0 |

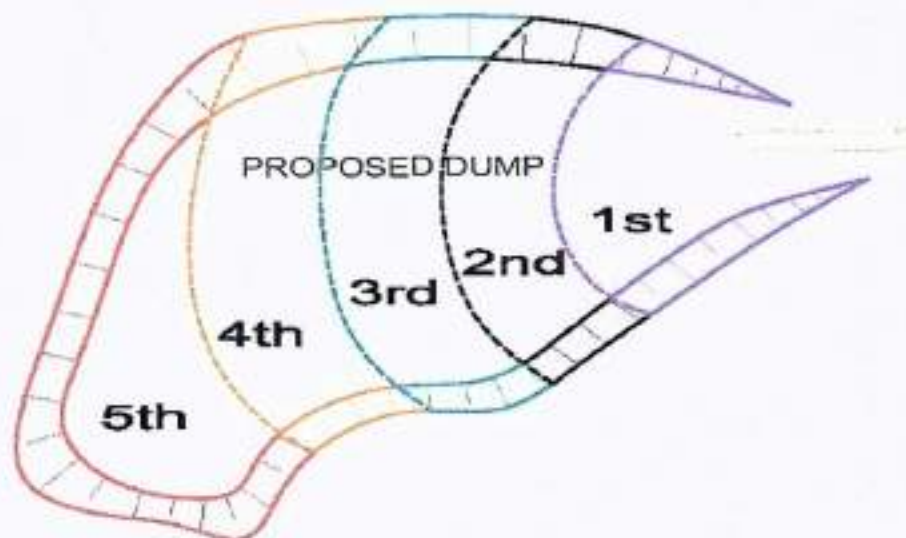
Table 3 Annual production of Ore/Overburden / Sub grade ore furnished





3A (iii) Over Burden Dump.

The Over Burden likely to be generated during plan period is 1, 16,910 cum. The year wise position is furnished in the above table No 03.



3B. Prescription for dump management:

- The over burden will be stacked in the earmarked area covering an area of 2.338ha at average 5m height in one terrace of 7.5m height.
- The slope will be maintained at angle of Repose i.e. $37^{\circ} 30'$ with the horizon and over all slop will be maintained less than $<28^{\circ}$.
- Retaining wall (Toe wall will be constructed all around the OB dump).
- Garland drain will be developed around waste dump outside the retaining wall to



receive run-off water coming out of the retaining wall.

- Settling tank will be made to receive the run-off water from garland drain to settle the sediments and release clean water to Rain Water Harvesting Pond.
- The Size of Settling Tank is 20mx10mx5m
- Retaining wall will be made up of waste rock / boulders. Random Stones will be arranged as dry wall to retain the earth.
- Garland drain will be developed all along the lower side of the waste dump.

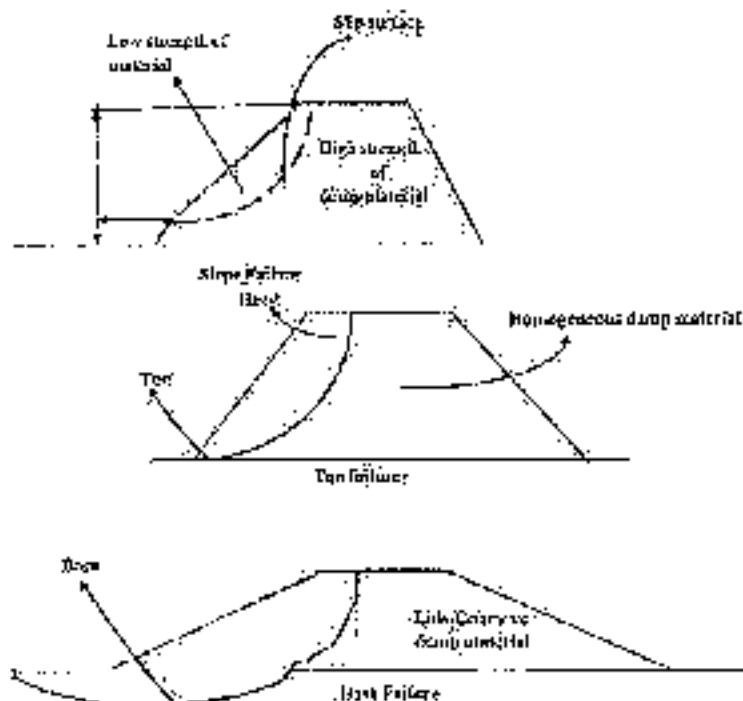
4. Anticipated fallout.

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)





Probable 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 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 slide 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 notably reduces 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 O3 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 2.338 hectare. Considering an average annual rainfall of 1400 mm the total precipitation that receives is 32,732 cum. Considering evaporation loss / percolation etc (40%), around 19640 m³ of water goes as runoff that may carry silt from dump surface. The catch drains / Garland Drains / Retaining walls will be maintained along the periphery of the dumps. The water collected through this drain will be channelized through silt trap/ settling pits to settling ponds and /or rain water harvesting pond and this reduce the silt carrying capacity. Very negligible quantity of silt may slip through depending upon intensity of rainfall.

C. Dust pollution due to wind / whirl wind.

The average wind speed as noticed in post monsoon is 2.25m/s with a maximum speed of 7.4 m/s. and minimum speed of 1.64m/s. This wind speed has a capacity to pick up heavy dust from dry surface of dump, ore stack & sub grade stack. The Ore stack usually remains moist and its being wind borne is mostly reduced. But there may be possibility of dust being air borne if not covered with grasses / tree covers from O8 dump.

D. Loss of life & property.

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

5A. Measures suggested:

The indicative measures as outlined in the Stage-I approval order Condition (xiv) (c) is as follows.

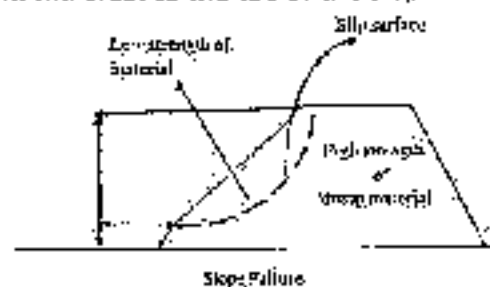
- (a) Construction of check dams, retention / toe walls to arrest sliding down of the excavated material along the contour.*



5B. Factors inducing sliding in excavated earth (Dump)

In mining operation the overburden is removed & dumped at an earmarked place. These materials are dumped in benches keeping 1st deck height 7.5m in this present case. The slope of each bench is maintained $<38^\circ$ and the overall slope is maintained at $<28^\circ$. Failure of internal dumps is a complex problem. In addition to environmental considerations, it directly affects the resource recovery, mine safety and mining cost. Overburden has been traditionally disposed off in the most economical way. The stability of dump is now recognized to be an important aspect of designing large open pit mines. The majority of slope stability analyses performed in practice still use traditional limit equilibrium approaches involving methods of slices that have remained essentially unchanged for decades. The finite element method represents a powerful alternative approach for slope stability analysis which is used to be accurate, versatile and requires fewer prior assumptions, especially, regarding the failure mechanism. Slope failure in the finite element model occurs 'naturally' through the zones in which the shear strength of the dump material is insufficient to resist the shear stresses.

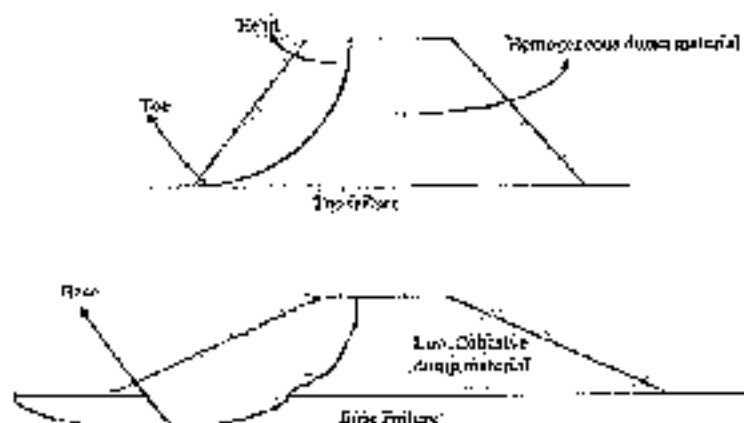
In dump materials, failure is likely to form as a shallow, large radius surface extending from a tension crack close behind the crest to the toe of the slope.



It fails in a circular manner as the slope dimensions are substantially greater than the dimensions of the rock fragments. The actual shape of the "circular" slide surface is influenced by the geological conditions in the slope mass. The slopes with loose, weak and soft rock masses can basically have three different failure geometries viz. slope failure, toe failure and base failure.



SCHEME TO ARREST SLIDING DOWN OF EXCAVATED EARTH AT
BAINIBASA GRAPHITE MIN. of M/s PRADHAN INDUSTRIES.



In the slope failure, the arc of rupture surface meets the slope above the toe. This is possible only when slope angle steep and the soil close to the toe possess high strength. Toe failure occurs when the soil mass of the slope above the base and below the base is mainly homogeneous.

There are a number of factors, which affect the dump stability. These factors are broadly classified as:

- ❖ Geometry and strength of the dump material,
- ❖ Hydro geological and rain water condition of dumping area,
- ❖ Load bearing capacity of dumping ground, and
- ❖ External loading conditions

5C. Quantum of work.

Considering all aspects / prescriptions made in Mining Plan and indicative suggestions made in condition (xiv) (c) the following works will be executed for checking sliding and failure of dump.

- I. Construction of Toe Wall / Retaining Wall: 385 meter around overburden Dump, 975m around sub grade stack and 230m around Top Soil Stack.
- II. Garland Drain: 400 meter around OB Dump, 240m around Top Soil
- III. Settling Tank: One number for OB Dump & one number for Top Soil.
- IV. In Top soil Management Scheme Condition No xiv (e) Garland drain (Catch Drain), Settling Tank and Toe wall has been considered separately. Hence not considered in this scheme



5D. Description of detail Parameters.

5D1. Retaining Wall.

It is proposed to construct toe wall over a length of 385m for OB Dump and 925m around sub grade ore stack. This construction will be covered in and completed in 5 years.

| Sl no | Location | Description | Size | Length in m |
|-------|-----------------------|----------------|-------|-------------|
| 1 | Waste Dump (OB Dump) | Retaining wall | 2mx2m | 385 |
| 2 | Sub Grade Stack | Retaining wall | 2mx2m | 925 |
| 3 | Top Soil Stack | Retaining wall | 2mx2m | 230 |

Table 4 Retaining Wall

Size of Toe wall: Considering the dump height, Lateral pressure that will be experiencing on the wall, intensity of Rain fall, the size of Toe wall is 2.0m x2m. Height will be of 0.50m BGL & 1.5m AGL. The Wall will be constructed from waste rocks / boulders obtained from quarry. As the toe wall is of RR dry parking, it will have void to act as Ooze holes. Hence no ooze hole will be specially provided.

Estimate for 100 meter:

Earth Work for Foundation: $2m \times 0.5m \times 100 = 100\text{cum}$ @ Rs 152.70/- per cum = Rs 15270/-

RR Stone dry walling: Foundation: $2m \times 0.5m \times 100 = 100\text{cum}$

Super structure: $2m \times 1.5m \times 100 = 300\text{ cum}$

Total 400 cum @ 525.30/- = 2,10,120/-

i) For Waste Dump 385 m @ 2.00 lakh per 100 m. = Rs 7.70 lakh

ii) For Sub Grade stack 925m @ Rs 2.00 lakh per 100 m= Rs 18.50lakh

5D2. Bottom Garland Drain / Catch drain.

In order to allow easy flow of runoff / dump water a garland drain to be provided just after Retaining wall on the outer side keeping a distance of 1m from the retaining wall (As indicated in the map annexed). A simple earthen drain is suggested. The dug out earth will be put at outer side as a bund and grass slips to be planted to stabilize the earth. Volume of Work: for 100m = $(1m \times 1.0m \times 100m) = 100\text{ m}^3$ @ Rs 152.70 per Cum = Rs 15, 270/-



**SCHEME TO ARREST SLIDING DOWN OF EXCAVATED EARTH AT
BAINIBASA GRAPHITE MINE of M/s PRADHAN INDUSTRIES.**



5D3. Settling Tanks.

On the drainage path of Garland Trench there will be one settling tanks (20mx10mx5m) .
The volume of Work = 20x10x5=1000 cum @152.70 per cum= Rs1, 52,700/-

5E. Estimated financial out lay.

| Financial provisions for Execution of Prescription. | | | | | | |
|---|-------------------------------------|----------------------|----------------------------------|----------------|---------------------|-------------------|
| Sl No. | Category of Work | Quantum of work | | Total in meter | Rate for 100 m / no | Amount in Lakh Rs |
| | | For OB Dump in meter | For Sub Grade Ore Stack in meter | | | |
| 1 | Retaining Wall | 385 | 925 | 1310 | 2.00 lakh | 26.20 |
| 2 | Bottom Garland Trench / Catch drain | 400 | 0 | 400 | 0.15270 | 0.62 |
| 3 | Settling Tank | 1 | 0 | 1 | 152700 | 1.527 |
| | Sub Total | | | | | 28.347 |
| 4 | Repair & maintenance | | | | 10% of above cost | 2.835 |
| | Total | | | | | 31.182 |
| | Add 20% excess for Cost escalation | | | | | 6.236 |
| | G. Total | | | | | 37.418 |

Table 5 Estimated Financial outlay

Total Financial outlay is Rs37.418 lakh (Rupees Thirty Seven lakh Forty One thousand and Eight Hundred only).

The work is required to be completed in 5 years from starting of the mining. The phasing of Work is as follows.

Physical Flow chart.

| Year / Work | 2018-19 | 2019-20 | 2020-21 | 2021-22 | 2022-23 | Total |
|------------------------------|---------|---------|---------|---------|---------|-------|
| Retaining wall (in m) | 200 | 230 | 280 | 300 | 300 | 1310 |
| Bottom Garland Trench (in M) | 200 | 200 | 0 | 0 | 0 | 400 |
| Settling Tank (no) | 1 | 0 | 0 | 0 | 0 | 1 |

Table 6 Physical flow chart

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

*Technically approved for Rs. 37, 41, 800/-
(Rupees Thirty seven lakh forty one thousand and eight hundred only)*

The scheme is verified and found correct technically

**Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle**

**Regional Chief Conservator of Forests
KORAPUT CIRCLE**



SCHEME TO ARREST SLIDING DOWN OF EXCAVATED EARTH AT
BAINIBASA GRAPHITE MINE of M/s PRADHAN INDUSTRIES.



6. EXECUTING AGENCY.

The above works will be executed by the User Agency under supervision of Mine Manager, Mines Advisor.

7. MONITORING & EVALUATION.

The Work will be periodically monitored by the User agency and Mines Manager. The status will be reported annually to the DFO, Rayagada & other authorities.

8. PLAN PERIOD & REVISION.

The plan is designed basing on Mining Plan. On revision of Mining plan / area of working / dump volume, this scheme may be revised and approved by the competent authority and implemented.

Encl: Map showing Retaining wall, Bottom Garland trench and settling tank around Dump, Mineral storage area.



"CHANDANAM" a Forest & Wildlife Consulting Society has been assigned by the User Agency to prepare. This scheme is Prepared & submitted accordingly.


(B. Maharana OFS SB-I Rtd)
Dy. Conservator of Forests.

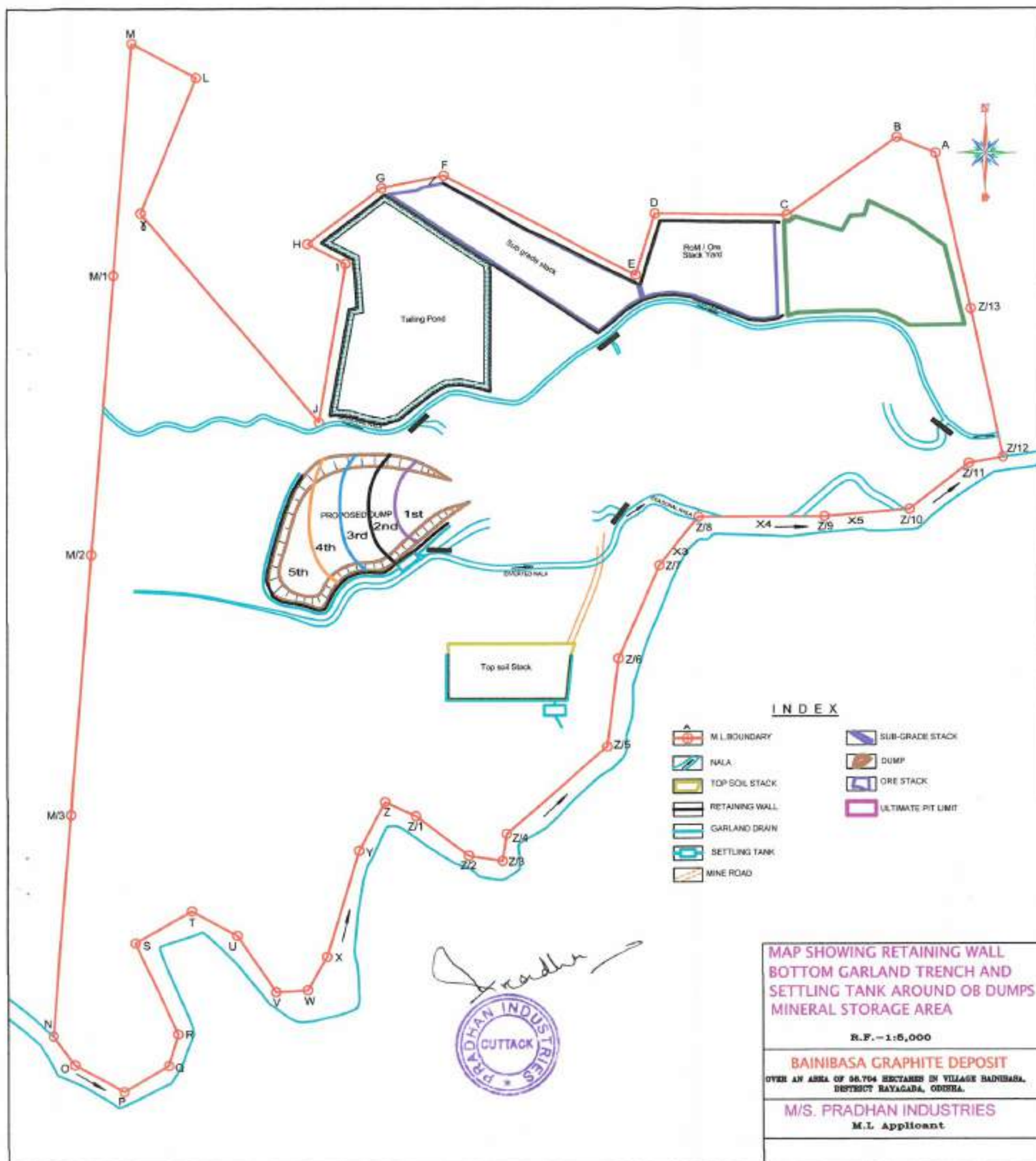

(Sri NK Rout, IFS. Rtd)
Dy. Conservator of Forests.



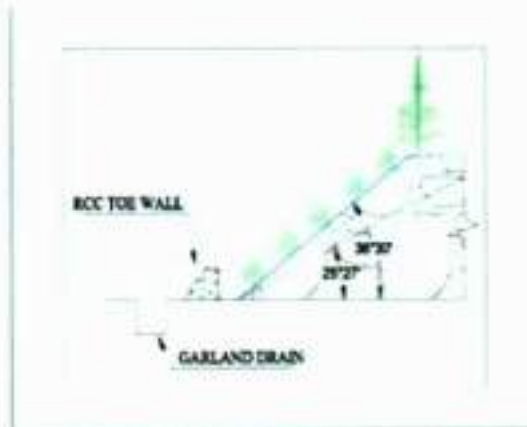

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION


Signature of Project Proponent.





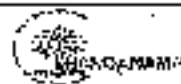
**SCHEME TO STABILIZE OVERBURDEN DUMP BY
GRADING & BENCHING IN THE BAINIBASA
GRAPHITE MINES OF M/S PRADHAN INDUSTRIES,
AGAINST DIVERSION OF 44.038 HECTARE OF
FOREST LAND
IN
RAYGADA DISTRICT, ODISHA.**



Compliance to:

Condition no. xiv(d) of in-principle Approval order vide F.No.8-58/2017-FC

Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.



SCHEME TO STABILIZE OVERBURDEN DUMP BY GRADING & BENCHING.

1. INTRODUCTION:

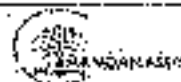
In course of approval of diversion of forest land to an extent of 44.038 hectare coming within ML area of Balubasa Graphite Mines, the MoEF & CC, Govt. of India Bhubaneswar In their "In principle approval" order F. No. 8-58/2017-FC, Dated 22nd January, 2018 have stipulated certain conditions for management of solid waste, top soil, checking of soil erosion etc. The condition reads as follows:

Condition No (xiv):

Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the plan / scheme shall be deposited in Ad-hoc CAMPA Account:

- (a) *Mitigative measures to minimize soil erosion and choking of stream 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 scheme;*
- (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;*
- (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° ; and*
- (e) *No damage shall be caused to the top soil and the user agency will follow the top soil management plan.*

NB: This scheme is to comply condition no (xiv) (d)



2. PRESENT SCENARIO:

The graphite mine at Bainibasa under Muniguda Talasil of district Rayagada is a new project. The Project has been granted by the Steel & Mines department, Government of Odisha vide Proceedings No 879/SM dated 10.01.2017. The lease has been executed on 11.01.2017. The Mining Plan has been approved vide order no MP/OTHA/20-ORI/SHU/2016-17/7097 Dated 17.11.2016 of Regional Controller of Mines, IBM, Dhubaneswar and valid for 5 years from date of operation of Mine.

2(a) The Mining Lease is over 58.704 ha. The land category and utilization pattern (Pre Mining) is as follows.

| Type of Land | | Kissam / Class of land
(as per land schedule) | Area | |
|--------------|-----------|--|--------|----------|
| | | | Acres | Hectares |
| Govt. land | AJA | Forest (Patra jungle) | 106.89 | 43.257 |
| | AAA | Forest (Bada jungle) | 1.93 | 0.781 |
| | AAA | Waste land (Pahad) | 0.20 | 0.081 |
| | Sub-total | — | 109.02 | 44.119 |
| Private land | — | Waste land (Dangar-2 & Dangar-3) | 36.04 | 14.587 |
| Total | — | — | 145.06 | 58.704 |

Table 1 Land Category and Utilization pattern

2.(b) The Approved Mining Plan envisages utilization of 44.038ha of Forest land and 0.081ha of Government Non Forest Land for mining and ancillary use. The proposed land utilization pattern during the Plan period / Conceptual period is as follows.

| Sl. No. | Type of land use | Present Land Use (ha) | As at the end of scheme period (ha) | As at the end of Conceptual period (life of mine) (ha) |
|---------|--|-----------------------|-------------------------------------|--|
| 1. | Area under excavation | — | 3.215 | 3.835 |
| 2. | Storage for Topsoil | — | 0.927 | 0.927 |
| 3. | Overburden dump | — | 2.338 | 2.338 |
| 4. | Mineral Storage | — | 2.945 | 2.945 |
| 5. | Infrastructure (office, rest shelter, workshop etc.) | — | 2.000 | 2.000 |

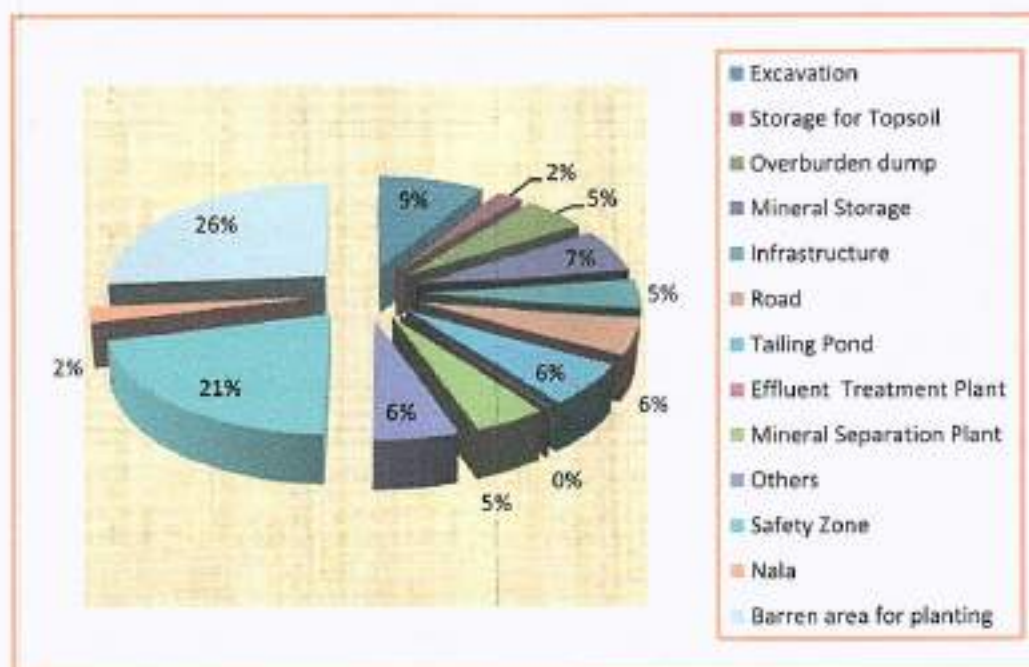


SCHEME TO STABILIZE OVERBURDEN DUMP BY GRADING & BENCHING IN BANDHAMANFI GRAPHITE MINE OF PRADHAN INDUSTRIES..



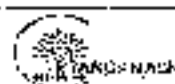
| | | | | |
|--------------|--|-----|---------------|---------------|
| 6. | Road | --- | 2.500 | 2.500 |
| 7. | Railways | --- | --- | --- |
| 8. | Tailing Pond | --- | 2.848 | 2.848 |
| 9. | Effluent Treatment Plant | --- | 0.064 | 0.064 |
| 10. | Mineral Separation Plant | --- | 2.136 | 2.136 |
| 11. | Township area | --- | --- | --- |
| 12. | Others | | | |
| | Water storage / reservoir | --- | 0.650 | 0.650 |
| | Rain water harvesting pond | --- | 0.900 | 0.900 |
| | Settling pond (4 nos.) | --- | 0.950 | 0.950 |
| --- | Sub-total | --- | 21.503 | 22.143 |
| 13. | 7.5m wide safety zone along M.L boundary | --- | 0.737 | 0.737 |
| 14. | 50m wide barrier along perennial nala bank | --- | 8.549 | 8.549 |
| 15. | Nala | --- | 1.073 | 1.073 |
| 16. | Barren area to be rehabilitated / planted | --- | --- | 11.617 |
| 17. | Remaining area | --- | 12.257 | --- |
| --- | Sub-total | --- | 22.616 | 21.976 |
| Total | --- | --- | 44.119 | 44.119 |

Table 2 Proposed land use pattern





SCHEME TO STABILIZE OVERBURDEN DUMP BY GRADING & BENCHING IN BANDHAMANI GRAPHITE MINE OF PRADHAN INDUSTRIES.



Condition no (xiv) (d) has stressed to stabilize the dump through management of dump slopes / height and angle of repose of excavated waste. It reads as *"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°."*

3. Salient Points of Waste Management (As Prescribed In the Mining Plan)

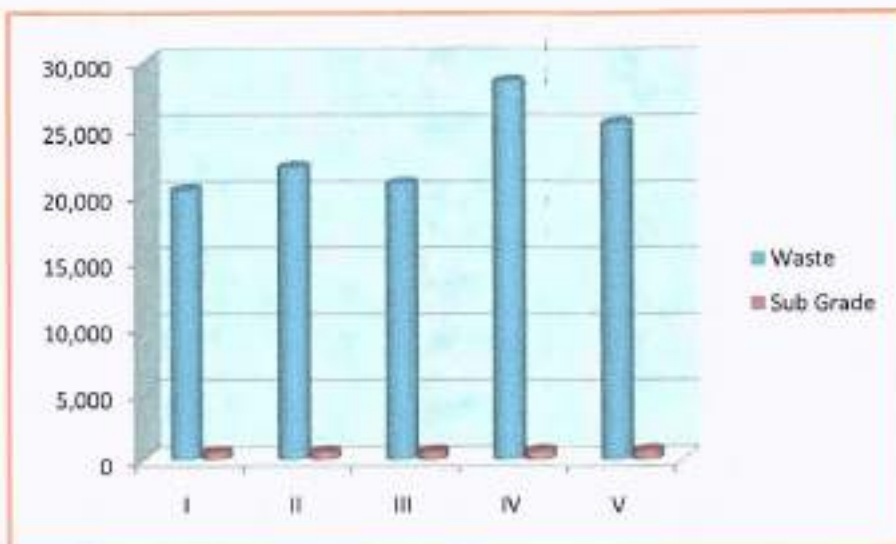
3A. Quantum of Waste Generation:

The Mine is likely to be In Operation from 2019. The production Schedule / waste Generation as given in the Mining Plan is as follows.

| Year | Pit no. | Total Excavation (m ³) | Top Soil (m ³) | OB/SB/IB / waste (m ³) | ROM (m ³) | | ROM / Waste Ratio |
|-------|--------------|------------------------------------|----------------------------|------------------------------------|-----------------------|----------------------------------|-------------------|
| | | | | | Ore (m ³) | Mineral reject (m ³) | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| I | Quarry-1 | 31,440 | 5,840 | 10,300 | 4,580 | 520 | 1:3.9 |
| II | -do- | 31,000 | 5,400 | 12,000 | 5,040 | 560 | 1:3.9 |
| III | -do- | 32,200 | 5,400 | 20,800 | 5,400 | 600 | 1:3.5 |
| IV | Quarry-1 & 2 | 42,588 | 7,785 | 24,180 | 5,888 | 632 | 1:4.5 |
| V | -do- | 39,572 | 7,022 | 25,330 | 5,888 | 632 | 1:4.0 |
| Total | | 173,800 | 32,450 | 116,910 | 26,496 | 2,944 | 1:4.0 |

Table 3. Quantum of waste generation

The Over burden and IB (Inter burden) that is likely to be generated is at column 5 and 7 above.



3B Management Prescribed in the Mining Plan.

The total waste Generation is 1, 16,910 cum which will be stacked over 2.338 ha. The waste will be dumped year wise as shown in the diagram.

- The over burden will be stacked in the earmarked area covering an area of 2.338ha at average 5m height in one terrace of 7.5m height.
- The slope will be maintained at angle of Repose i.e. $37^{\circ} 30'$ with the horizon and over all slop will be maintained less than $<28^{\circ}$.
- Retaining wall (Toe wall will be constructed all around the OB dump).
- Garland drain will be developed around waste dump outside the retaining wall to receive run-off water coming out of the retaining wall.
- Settling tank will be made to receive the run-off water from garland drain to settle the sediments and release clean water to Rain Water Harvesting Pond.
- The Size of Settling Tank is 20mx10mx5m
- Retaining wall will be made up of waste rock / boulders. Random Stones will be arranged as dry wall to retain the earth.
- Garland drain will be developed all along the lower side of the waste dump.



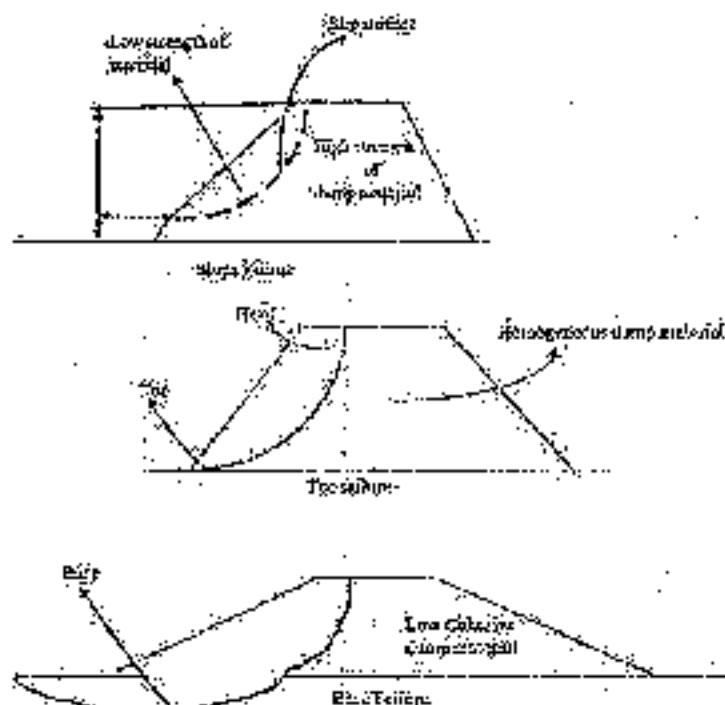
4. ANTICIPATED FALLOUT.

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)





B. 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 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 slide 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 reduces 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.



C. Loss of life & property.

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

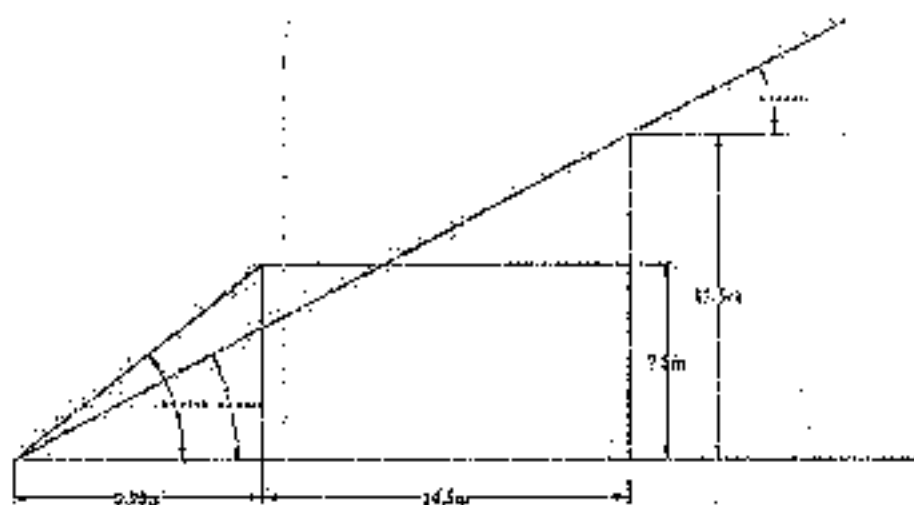
S. MEASURES SUGGESTED IN THE "IN PRINCIPLE APPROVAL" & SCHEME FOR ITS COMPLIANCE.

Condition No (xiv)

- 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° ;*

As per the mining plan for Benching & Grading, the following suggestion has been made.

- Dump height: 7.5m { It will attain 5m height during 1st Five year }
- Over all slope: $<28^{\circ}$.
- Slope of each terrace: $<37^{\circ} 30'$





SCHEME TO STABILIZE OVERBURDEN DUMP BY GRADING & BENCHING IN BANDHAMANFI GRAPHITE MINE OF PRADHAN INDUSTRIES.



Besides the above parameters, while dumping the overburden it should be well compacted by using mechanical means. Stabilizing dump through Coir matting is also suggested. Other vegetative measures has been elaborately dealt in schemes under (vi) (b) & (c).

6. IMPLEMENTING AGENCY.

This prescription is to be implemented by the user agency. As it is a part of mining operation & no extra cost is required in view of implementing this condition from Forest Diversion point of view, no cost estimate has been made.

7. MONITORING & EVALUATION.

The implementation & its maintenance will be evaluated by the authority of the User Agency regularly. The Divisional Forester Officer, Rayagada may be kept informed from time to time as required.

Encl: Drawing depicting Slope angle / Grading & Benching.



"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.

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

Signature of Project Proponent.

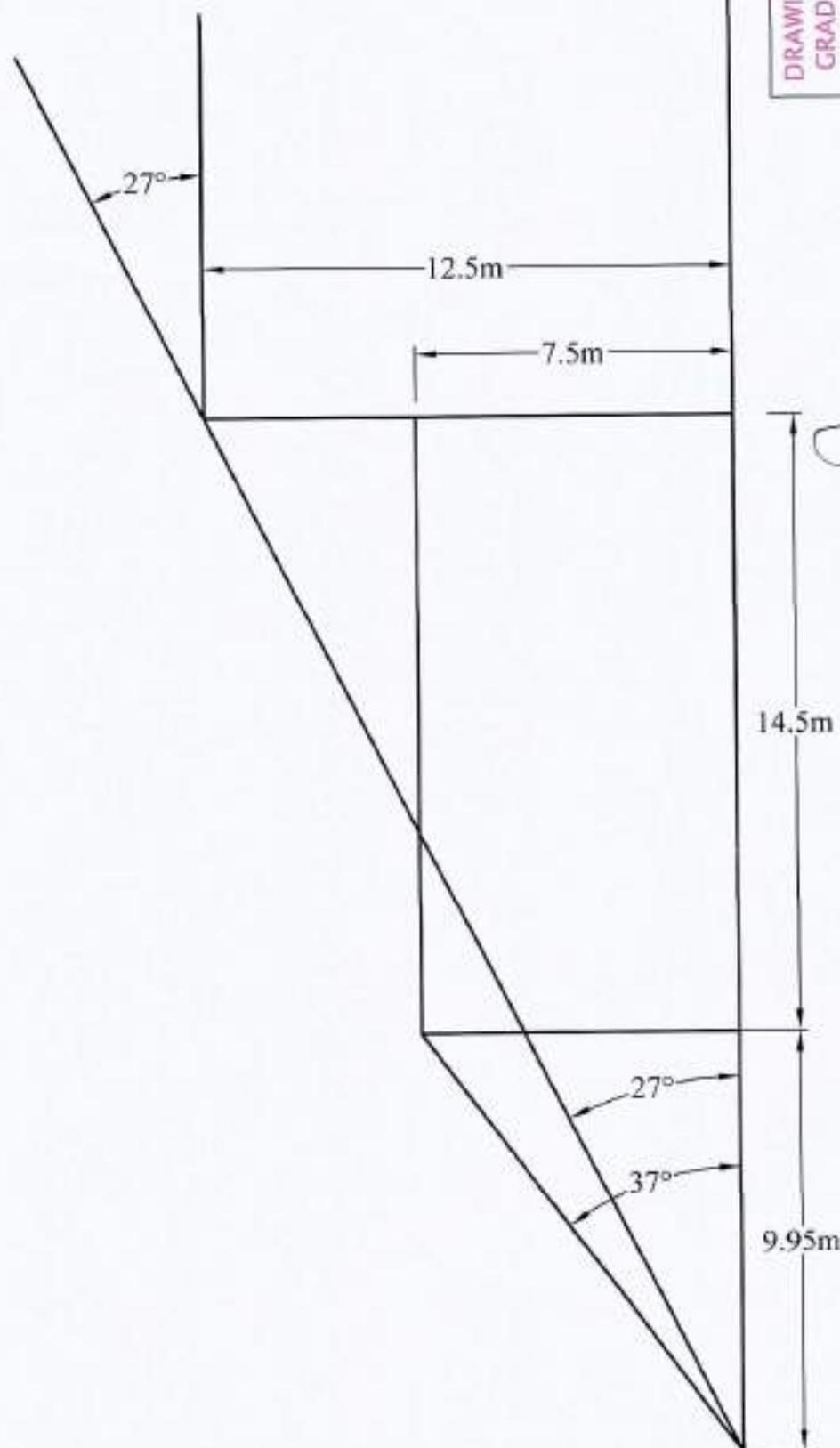


The scheme is verified and found correct technically.

Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle

Regional Chief Conservator of Forests

Technically Approved



DRAWING DEPECTING SLOPE ANGLE,
GRADING AND BENCHING IN DUMPS

BAINIBASA GRAPHITE DEPOSIT

OVER AN AREA OF 58.704 HECTARES IN VILLAGE BAINIBASA,
DISTRICT RAYAGADA, ODISHA.

M/S. PRADHAN INDUSTRIES

M.L. Applicant

Pradhan



9. Budgetary Provision.

| Sl No | Description of Work | Rate | Quantum | Amount in Rs |
|-----------------------------|--|--|---------|--------------------|
| 1 | Maintenance of Slope | LS | | 18750 |
| 2 | Cost of Digging catch drain & Siltation Tank | 194.89 per cum | 1240 | 241633.60 |
| 3 | Maintenance of catch drain & Siltation Tank | @5% per Yr | 10 year | 120831.80 |
| 4 | Planting of Vetivera & Vitex including maintenance for 10 year | Rs10 Planting + 10 Maintenance = 20.00 per sq. M | 1453.2 | 29064.00 |
| 5 | Construction of Retention wall | | | |
| | a- Foundation Earth Work | 194.89 per cum = 1 Running m | 230 | 44824.70 |
| | b- RR Stone Masonry | Rs285780/- per 100 m | 230 | 657294.00 |
| Total | | | | 1112398.10 |
| Add 20% for Cost escalation | | | | 222479.62 |
| G. Total | | | | 1334877.72 |
| | | | | Or say 13.349 Lakh |

(Rupees Thirteen Lakh Thirty four thousand & Nine hundred only.)

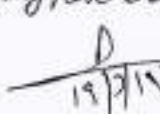
Submitted:


 DIVISIONAL FOREST OFFICER
 RAIPUR DIVISION

USER AGENCY



Approved for Rs. 13,34,900/-
 (Rupees Thirteen lakh thirty four thousand nine hundred only.)


 Regional Wild Conservator of Forests
 KORAPUT CIRCLE

Scheme
For Management of Top Soil
At Bainibasa Graphite Mine of M/s Pradhan
Industries.

(As it pertains to diversion of 44.038 hectare of Forest Land)



Compliance to:

*Condition no. xiv(e) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.*



Scheme for management of top soil at Bainbasa Graphite Mine of M/s Pradhan Industries.

1. Introduction.

In course of approval of diversion of forest land to an extent of 44.038 hectare coming within ML area of Bainbasa Graphite Mines, the MoEF & CC, Govt. of India Bhubaneswar in their "In principle approval" order F. No. 8-58/2017-FC, Dated 22nd January, 2018 have stipulated certain conditions for management of solid waste, top soil, checking of soil erosion etc. The condition reads as follows:

Condition No (xlv):

Following activities shall be undertaken by the user agency at the project cost and appropriate cost of the plan / scheme shall be deposited in Ad-hoc CAMPA Account:

- (a) Mitigative measures to minimize soil erosion and choking of stream 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 scheme;*
- (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;*
- (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°; and*
- (e) No damage shall be caused to the top- soil and the user agency will follow the top soil management plan.*



**SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA
GRAPHITE MINING LEASE AREA.**



| | | | | |
|--------------|--|-----|---------------|---------------|
| 7. | Railways | --- | --- | --- |
| 8. | Tailing Pond | --- | 2.848 | 2.848 |
| 9. | Effluent Treatment Plant | --- | 0.064 | 0.064 |
| 10. | Mineral Separation Plant | --- | 2.136 | 2.136 |
| 11. | Township area | --- | --- | --- |
| 12. | Others | | | |
| | Water storage / reservoir | --- | 0.650 | 0.650 |
| | Rain water harvesting pond | --- | 0.900 | 0.900 |
| | Settling pond (4 nos.) | --- | 0.950 | 0.950 |
| | Sub-total | --- | 21.503 | 22.143 |
| 13. | 7.5m wide safety zone along M.L boundary | --- | 0.737 | 0.737 |
| 14. | 50m wide barrier along perennial nala bank | --- | 8.549 | 8.549 |
| 15. | Nala | --- | 1.073 | 1.073 |
| 16. | Barren area to be rehabilitated / planted | --- | --- | 11.617 |
| 17. | Remaining area | --- | 12.257 | --- |
| | Sub-total | --- | 22.616 | 21.976 |
| Total | | --- | 44.119 | 44.119 |

Table 2 Proposed Land use pattern

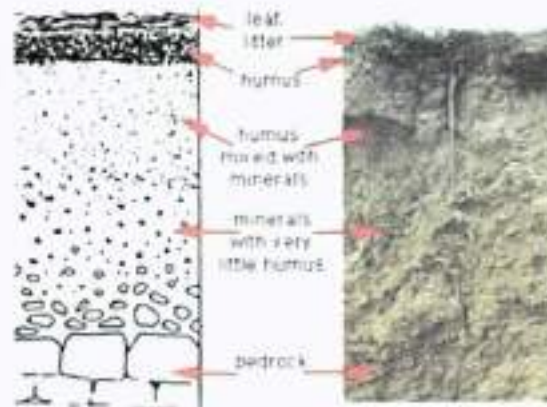
Condition No (xiv) (e) has stressed on "*Management of Top Soil*" in a scientific manner. On examining the current Mining Plan and the land use pattern it is observed that land to be covered under excavation is 3.245ha within 1st Five Years and 0.64 ha additional land in next 6 years i.e. at Conceptual Stage.

3. Soil Profile in the area.

The Rain cut areas / Nalla banks have been studied minutely by the expert team on their visit on 17th February, 2018 and observed the soil profile of the area as given in the following picture.

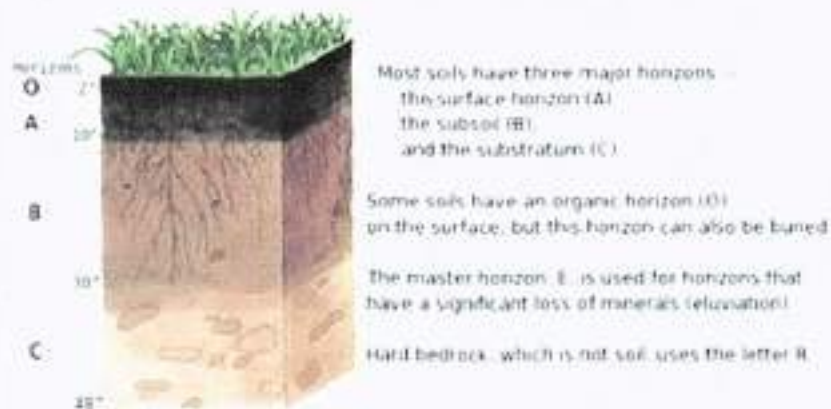


SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA GRAPHITE MINING LEASE AREA.



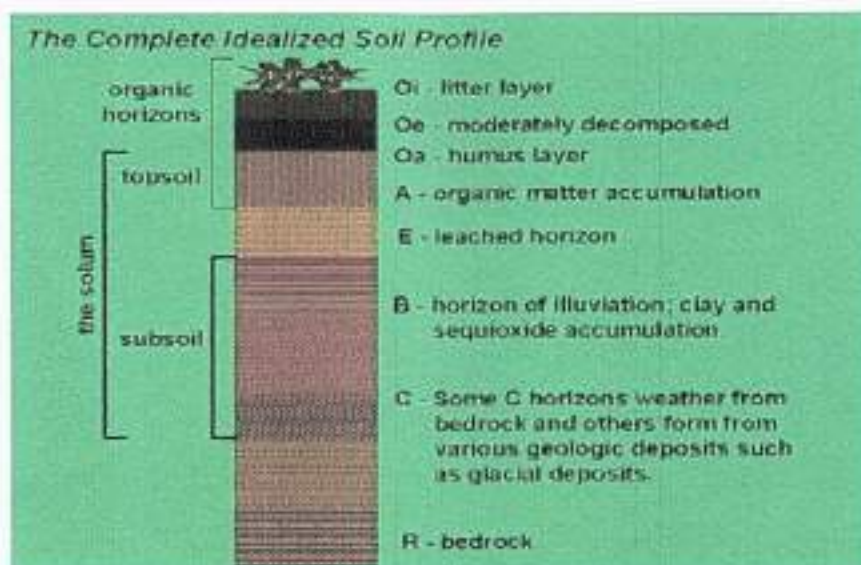
On analysis of soil profile it is seen that the soil profile of the lease area contains O, A, E, B, C & R horizons as indicated in the diagram below.

Soil Profile





3A. Components of the Soil Profile



Soil horizon makes up a distinct layer of soil. The horizon runs roughly parallel to the soil surface and has different properties and characteristics than the adjacent layers above and below. The **soil profile** is a vertical section of the soil that depicts all of its horizons. The soil profile extends from the soil surface to the parent rock material.

The **regolith** includes all of the weathered material within the profile. The regolith has two components: the **solum** and the **saprolite**. The solum includes the upper horizons with the most weathered portion of the profile. The saprolite is the least weathered portion that lies directly above the solid, consolidated bedrock but beneath the solum.

3A.1 Master Horizons

There are **5 master horizons** in the soil profile. Not all soil profiles contain all 5 horizons; and so, soil profiles differ from one location to another. The 5 master horizons are represented by the letters: O, A, E, B, and C.



O: The O horizon is a surface horizon that is comprised of organic material at various stages of decomposition. It is most prominent in areas having tree growth where there is the accumulation of debris fallen from trees.

A: The A horizon is a surface horizon that largely consists of minerals (sand, silt, and clay) and with appreciable amounts of organic matter. This horizon is predominantly the surface layer of many soils in grasslands and agricultural lands.

E: The E horizon is a subsurface horizon that has been heavily leached. Leaching is the process in which soluble nutrients are lost from the soil due to precipitation or irrigation. The horizon is typically light in color. It is generally found beneath the O horizon.

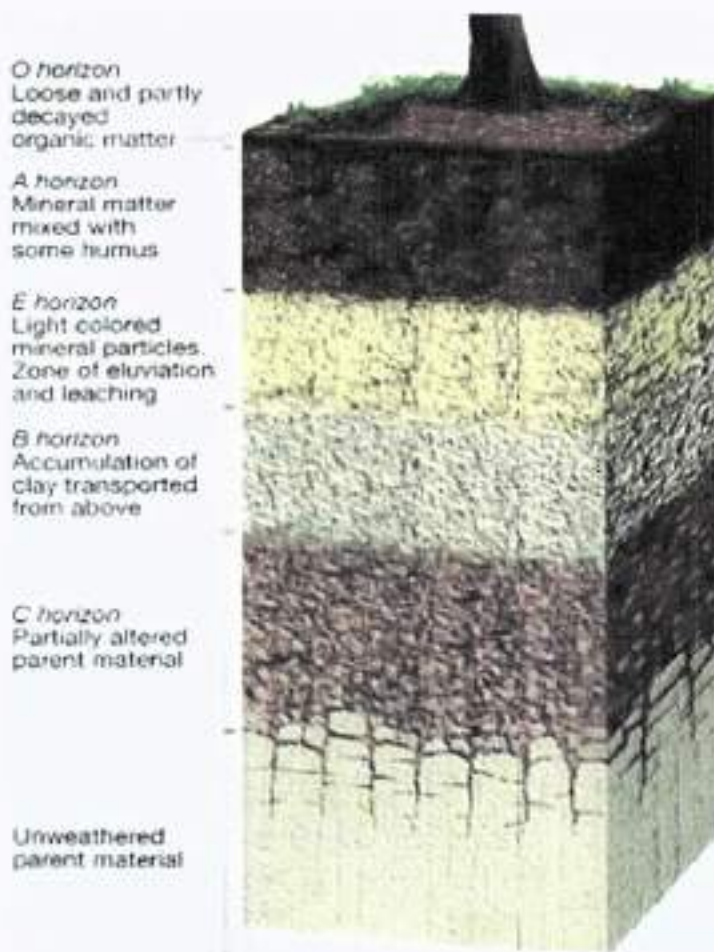
B: The B horizon is a subsurface horizon that has accumulated from the layer(s) above. It is a site of deposition of certain minerals that have leached from the layer(s) above.

C: The C horizon is a subsurface horizon. It is the least weathered horizon. Also known as the saprolite, it is unconsolidated, loose parent material.

The master horizons may be followed by a subscript to make further distinctions between differences within one master horizon.



SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA
GRAPHITE MINING LEASE AREA.



From the above analysis it is seen that for the purpose of this scheme O Horizon (5cm deep) and A Horizon (25cm deep) and E horizon (70cm deep) combined may be very well taken as top soil. (i.e. soil up to 1 meter depth). In the Mining plan also soil coming within 1 meter deep from Ground level is taken as Top Soil.

4. Mining & Top soil Generation.

The Mine will be operated by Open cast Semi Mechanized method. There will be two pits from which Ore will be excavated as per Mining Plan. The Year wise production of Top soil as prescribed is as follows.

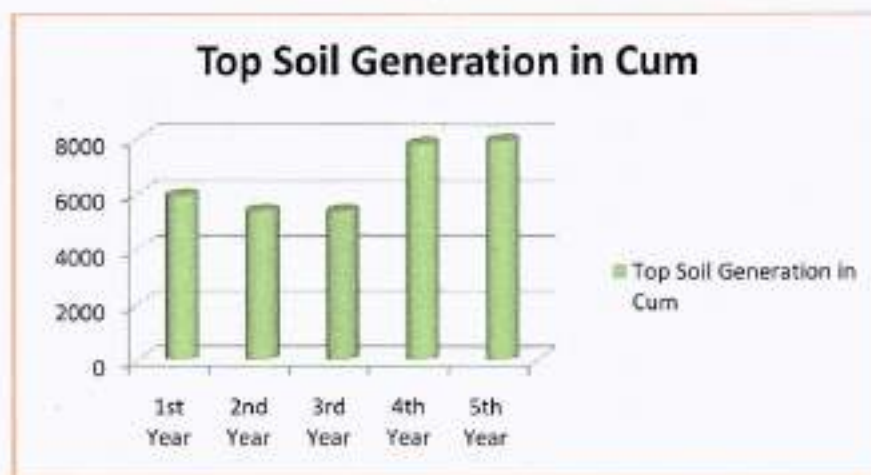


**SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA
GRAPHITE MINING LEASE AREA.**



| Year | Pit No | Top Soil to be generated in M ³ | | Area under Quarry. |
|----------------------|--------------|--|-------------|---|
| | | Quarry 1 | Quarry-2 | |
| 1 st Year | Quarry-1 | 5940 | --- | Quarry no-1: 27810 sq M.
i.e. 2.781 ha |
| 2 nd Year | Quarry-1 | 5400 | --- | |
| 3 rd Year | Quarry-1 | 5400 | --- | |
| 4 th Year | Quarry-1 & 2 | 5508 | 2280 | Quarry No-2: 4640 sq. M
i.e. 0.464 ha. |
| 5 th Year | Quarry-1 & 2 | 5562 | 2360 | |
| Total | --- | 27810 | 4640 | 32450 |

Table 3 Year wise production of Top soil



During the present approved Mining Plan, excavation over an area of 3.245 ha has been suggested during 1st Five (5) year of working. The top soil @ 1m deep is likely to be generated. The total volume of Top soil to be generated is 32450 M³.

At the end of Conceptual period total area under excavation is 3.885ha i.e. additional area of 0.640ha within the next plan period i.e. after 1st five year & within the life of the mine (11 year as predicted as per present exploration level) which will generate 6400 m³ of top soil.



5. Objectives of Management

The objectives of "Management of Top Soil" are

- To retain valuable organic and essential mineral nutrients of top soil beneficial to plant growth.
- Leaching of plant nutrients checked as far as practicable.
- Carrying of Silt in runoff is checked and excess rain water is to be stored in Rain water harvesting Pond
- Utilize the top soil in plantations to be taken up during plan period as far as possible.
- Check any rill formation on top soil dump.

6. Top Soil Management

In order to manage the top soil the following suggestions are put forth.

- ✓ Top soil likely to be generated is to be dumped at earmarked place not affected by mining operation.
- ✓ Dump may have a slope less than 28°
- ✓ Cover the reserved soil with a tarp / cover mat.
- ✓ Sprinkle grass seed over the reserved soil.
- ✓ Covered $1/3^{\text{rd}}$ of Dump Slope by Grass tufting.
- ✓ During reclamation the top soil may be utilized to cover the top after filling and covered the area under tree planting.
- ✓ Planting dwarf / medium size trees as soon as possible and covered with mulch to prevent the soil from washing or blowing away.
- ✓ Around 1% to 1.5% of the top soil to be generated will be utilized during tree planting operation.
- ✓ Part of the soil will be utilized while undertaking tree planting on Safety Zone area, Dump stabilization tree planting programme.
- ✓ Catch drains will be provided / maintained to reduce silt in run off.
- ✓ Provide Siltation / Sedimentation tank and allow the clear water to Rain water harvesting pond for use / Percolation / ground water recharging.

7. Area Assigned For Top Soil Storage:

In the Approved Mining plan 0.927 hectare area has been earmarked for storage of top soil. The total quantum of top soil generation during 1st five years is 32450 cum. On stacking of the top soil, the probable height of dump will be $32450 / 9270 = 3.500$ meter. Dumping of top soil likely to be generated beyond the plan period is estimated to be 6400 m³ and dump



height may increase by $6400/8000 = 0.8$ meter as 2nd terrace. The area marked as Top soil dump is of size 66.3m X 140m of rectangular Size.

8. Methods To Be Adopted.

In order to manage the top soil the following steps to be taken.

a. Maintaining the Slope.

The slope of the stacked soil will not be allowed above 28°. This aspect will be strictly maintained while placing soil to be scraped during plan period. During next plan period the Generated Top Soil will be stacked as 2nd terrace leaving at least 3m from periphery from all sides. The height of 1st stack is of 3.5 m and 2nd stack will be of maximum 3 meters high.

b. Planting of Grass slips / cuttings of vitex.

Vitex negundo cuttings will be planted on the periphery / slop to a height of 1.0 meter and afterwards Grass slips of Vetiveria zizanioides (Bena) will be planted another one meter height on slopes.

The top portions will be covered with Grass seeds / slips (*Cynodon dactylon*) doob grass.



Surface area of the Top soil Dump: $(65+142.6) \times 2 \times 3.5 = 1453.2 \text{ m}^2$

Cost of Planting / seed sowing @Rs25/- per Sq. M. Total cost involved =36330/-



Annual maintenance 10% of the cost for 10 year i.e. @ Rs 3633/- per year = Rs36330/-

Total Cost = 36330 + 36330 = Rs72660/-

c. Providing Catch Drain.

Top soil is likely to be washed away due to rain before it is finally stabilized. Hence catch drain around top soil stack is required. Catch drain will be dug out all around the stack leaving the upper side. The Catch drain will be joined to siltation tank. From Siltation tank the water will be guided to Rain Water Harvesting pond.

Size of the Catch Drain: 1.00m x 1.00m

Length of the Drain: 240 meter

Volume of Earth Work: 100 cum for 100 running meter. For 240 meter the volume of earth work is 240 cum

Digging of Siltation Tank: 20m x 10m x 5m = 1000 cum.

Total Earth Work: 1240 cum

Cost: @Rs 152.70 per cum (including GST) for 1240 cum the cost is Rs189348/-

Maintenance: The catch drains and siltation tank will be maintained every year before rains. The Annual maintenance cost is considered @5% of the estimated cost @ 5% of Rs189348/- =Rs9467.4/- for 10 years Rs 94674/-

d. Construction of Toe Wall / Retaining wall:

In order to prevent any sliding down of Top soil from stack, It proposed to provide 230 meters of Toe wall / Retaining wall as shown in the map.

Size of Toe wall: Considering the dump height, Lateral pressure that will be experiencing on the wall, intensity of Rain fall, the size of Toe wall is 2.0m x 2m as suggested in the Mining Plan. Height will be of 0.50m BGL & 1.5m AGL The Wall will be constructed from waste rocks / boulders obtained from quarry and arranged as dry random stone wall. As



**SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA
GRAPHITE MINING LEASE AREA.**



the toe wall is of RR dry wall, it will have void to act as Ooze holes. Hence no ooze hole will be specially provided.

Estimate for 100 meter:

Earth Work for Foundation: $2\text{m} \times 0.5\text{m} \times 100 = 100\text{cum}$ @152.70 per cum =Rs 15270/-

RR Stone dry walling: Foundation: $2\text{m} \times 0.5\text{m} \times 100 = 100\text{cum}$

Super structure: $2\text{m} \times 1.5\text{m} \times 100 = 300\text{ cum}$

Total 400 cum @ 525.30/- = 2,10,120/-, Total estimated value for 100m= 210120+15270=225390

For 230m the cost comes to Rs 5,18,397/-

9. Budgetary Provision.

| Sl No | Description of Work | Amount in Rs |
|-----------------------------|--|---------------------------------|
| 1 | Maintenance of Slope | 15000 |
| 2 | Cost of Digging catch drain & Siltation Tank | 189348 |
| 3 | Maintenance of catch drain & Siltation Tank | 94674 |
| 4 | Planting of Vetivera & Vitex including maintenance for 10 year | 72660 |
| 5 | Construction of Retention wall | 518397 |
| Total | | 890079 |
| Add 20% for Cost escalation | | 178015.8 |
| G. Total | | 1068094.8 or 10.681 lakh |

Table 4 Budgetary Provision

(Rupees Ten lakh Sixty Eight thousand and One Hundread only.)

10. Execution.

This is a part of the mining operation and to be executed by the User agency.

11. Monitoring & Evaluation.

The execution will be monitored & evaluated by field & managerial staffs of M/s Pradhan Industries. It may be inspected by the mining / forest authority periodically.

End: A Map showing the Top soil stack with Catch drain / Siltation Tank along with ML boundary.

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

*Technically approved for Rs 10,68,100/-
(Rupees Ten lakh Sixty eight thousand one hundred only)*

The Scheme is verified and found correct technically.

**Ast. Conservator of Forests
O/o R.C.C.F., Koraput Circle**

**Regional Chief Conservator of Forests
KORAPUT CIRCLE**



SCHEME FOR MANAGEMENT OF TOP SOIL IN BAINIBASA
GRAPHITE MINING LEASE AREA.



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

(B. Maharana GFS SB-I Rtd)

Dy. Conservator of Forests.

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION
Signature of Project Proponent.

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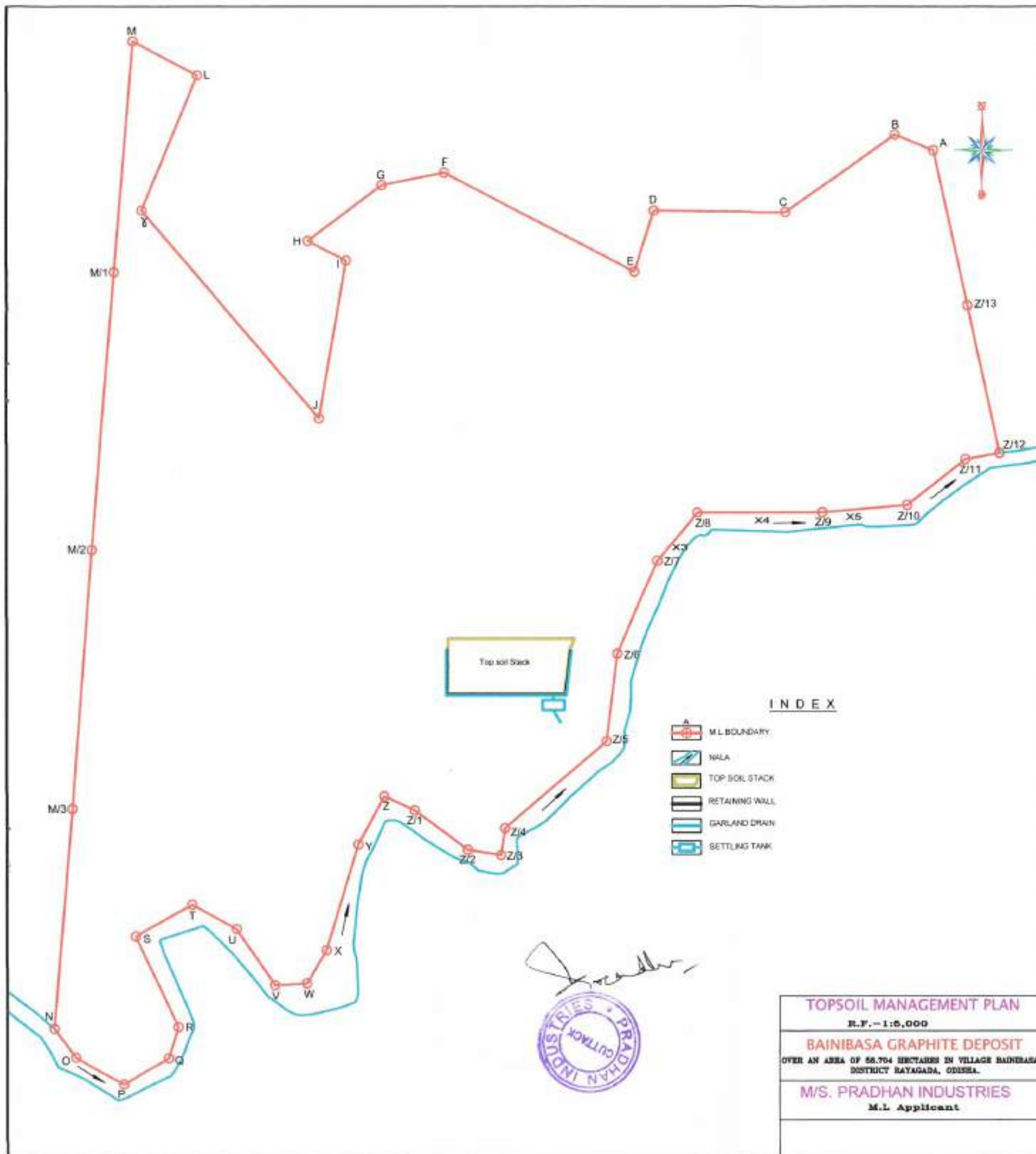
Analysis of rate for Earth Work. (For 100 cum)

| Sl. No | Description. | Unit required | Rate | Amount |
|--------|--|-------------------------------|--------|-------------------------------|
| i. | Earth work in hard soil or gravelly soil within 50m. Initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per the direction of the Engineer-in-charge. | Labour
Man Mulia 21.5 nos. | 224.30 | 4822.45 |
| | | Woman Mulia 21.5 nos | 224.30 | 4822.45 |
| | Sub total (Labour) | | | 9644.90 |
| ii. | Overhead Charges @ 10 % on (i). | | | 964.49 |
| iii. | 2% Sundries and T & P etc. on (i) | | | 192.90 |
| (iv) | Total for Earth Work | | | 10802.29 or say 108.03 |
| (v) | Add 20% excess for foundation/trenches etc | | | 21.61 |
| 2 | Compacting of soil on embankments. | | | |
| i | Ramming or rolling earth work with light H.R.R. in embankment in layers not exceeding 0.3m Data for 28.31 | Labour Man
Mulia 0.75 nos | 224.30 | 168.225 |
| | | woman mulia 0.5 nos | 224.30 | 112.15 |
| | Sub Total (labour) | | | 280.375 |
| ii | Overhead Charges @ 10 % on (i) | | | 28.04 |
| iii | 2% Sundries and T & P etc. on (i) | | | 5.61 |
| iv | Total | | | 314.025 |
| v | For 100 cum = Rs.314.025 X 100/28.31 = Rs. 1109.24 | | | 1109.24 or say 11.10 per cum. |
| | Total: (108.03+21.61+11.10) | | | 140.74 |
| | Contractor profit @ 7.5% | | | 10.56 |
| | Add Labour cess @ 1% | | | 1.40 |
| | G Total per Cum of Earth work | | | Rs152.70 |

(Rupees One hundred Fifty Two & Seventy Paise only)

[Signature]





Condition no. (xx) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

SCHEME FOR Fencing, Protection and Regeneration of the safety zone area In respect of Bainibasa Graphite Mines of M/s Pradhan Industries in Rayagada District. (Part-I)

Revised Financial Outlay @ Rs 286.30 per Day.

1. Cost Estimate.

The cost estimate for implementation of scheme is as given below.

Table 1 Cost estimate of the scheme

| SI No | Item of Work | Area in Ha / Number of Plants | Rate in Rs | Amount in Rs | Remark. |
|-------|--|-------------------------------|---|------------------|---------|
| 1 | ANR in SZ area / Green belt area @600 plants per ha | 2.06 ✓ | 68084 ✓ | 140253 ✓ | |
| 2 | Plantation on SZ area under Private ownership. At a spacing of 3mx3m i.e. 1100 plants per ha | 1.625 ha= 1788 no | Seedling cost: Rs36/-
Planting & Protection: Rs134/- = Rs170/- per plant | 303960 ✓ | |
| 3 | Protection of Enumerated trees on Safety Zone | 54 number | Rs32/- per plant per year for 10 year | 17280 ✓ | |
| 4 | Barbed wire Fencing | 5.027Rkm | Rs.673263/-per RKM | 3384493 ✓ | |
| | Sub Total: | | | 3845986 | |
| | Add 20% for cost escalation: | | | 769197 ✓ | |
| | G. Total | | | 4615183 ✓ | |

(Rupees Fort+y six lakh fifteen thousand one hundred eighty three only)

Submitted

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

USER AGENCY

Approved for Rs46,15,183/-
(Rupees Forty six lakh Fifteen thousand one hundred eighty three only)

Regional Chief Conservator of Forests
KHORAPATI CIRCLE



**SCHEME FOR
Fencing, Protection and Regeneration of the safety
zone area**

**In respect of Bainibasa Graphite Mines of
M/s Pradhan Industries in Rayagada District.**

As it Pertains to Diversion of 44.038 hectare forest land.



Compliance to:

**Condition no. (xx) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd
January,2018 by MoEF & CC, Govt. of India, New Delhi.**



SCHEME FOR

Fencing, Protection and Regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.

1. Introduction

Bainibasa Graphite Mining Lease over an area of 58.704ha at village Bainibasa under Muniguda Tahasil of Rayagada District has been granted by Steel & Mines Department, Government of Odisha vide No Proceedings No II (GR) SM-01/2017/379/SM Dated 10.01.2017 and lease deed has been executed on 11th January 2017. The ML area contains 44.038ha of Revenue Forest Land and lessee has applied for approval u/s 2(ii) of the Forest (Conservation) Act, 1980 vide proposal No FP/OR/MIN/74824/2017. The MoEF&CC, New Delhi, Government of India has issued "In Principle Approval Order" vide F.No 8-58/2017-FC Dated 22nd January, 2018.

In the "In Principle Approval Order" a set of stipulated conditions has been set out by the MoEF&CC, New Delhi for compliance before issue of Final Approval Order "Stage-II Order". The Condition (xx) of Para-2 reads as follows.

Condition no (xx): "Fencing, protection and regeneration of the safety zone area [7.5 meters strip shall be kept within the mining lease boundary and area of the Safety Zone shall be part of the total area of the mining lease as per the Ministry's guidelines dated 27.05.2015] shall be done within three year at the project cost from 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 Stage-II clearance and maintained thereafter in accordance with the approved plan in consultation with the State Forest Department."

This condition deals with two different matters i.e.

- i. Fencing, Protection and Regeneration of the safety zone area i.e. 7.5 meters strip all along the mining lease boundary to be carried out within three year at the project cost from issue of Stage-II Clearance.
- ii. 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 within three years from the date of Stage-II clearance and maintained thereafter. Shape file of the DFL area selected will be submitted to MoEF&CC.



This Scheme is prepared to comply the first part of the condition i.e. fencing, protection and regeneration of the safety zone area i.e. 7.5 meters strip all along the mining lease boundary to be carried out within three year at the project cost from issue of Stage-II Clearance.

2. The boundary line & safety zone.

The Boundary line of Mining lease area is 4837m or 4.837 km. The 7.5meter strip area computed to be 3.685 hectare which comprises designated Safety Zone (Forest land) i.e. 0.737 ha, 1.516ha non forest private land. [Ref: condition no (ii)]. 1.432 ha area is coming under Green belt zone along the sakat nala boundary. The entire area comes within the ML area, village Bainibasa tahasil: Muniguda in district Rayagada.

Table 1. Entire area comes with in ML area

| Sl No | Description | Area In Ha | | Total in ha |
|-------|--|------------|------------|-------------|
| | | Forest | Non Forest | |
| 1 | 7.5 m wide Safety Zone along ML boundary | 0.737 | 1.516 | 2.253 |
| 2 | 7.5 m along Nala course | 1.923 | 0.109 | 1.432 |
| | | 2.06 | 1.625 | 3.685 |

3. Proposed Methodology:

After field verification it is observed that the density of the existing vegetation is less than 0.1 with gaps in patches. This needs to enrich the crop condition in the Safety zone by way of planting local species. Similarly the existing vegetation needs regeneration cleaning to allow the promising growth of various species to attend further growth with distinct crown. Hence it is proposed to take up ANR planting @ 600 nos of seedlings per hectare.

The non forest private land also forms a part of Safety Zone to a greater area. At present this area is fallow land (completely not in use). It is proposed to motivate the land owner (Tenant) to plant fruit bearing species mostly Mango and Kaju preferred by them. The cost of such planting at initial stage will be borne by the lessee at project cost.

The Green belt area coming within 7.5 meter zone will also be maintained and enriched under ANR planting @600 plants per ha.

For protection of planted species Barbed wire fencing will be provided around Government land along the boundary and in case of private land covered under tree planting with assistance of the User Agency "Synthetic Wire Mesh Tree Guard" will be provided.

Further it is to mention that there are 54 numbers of trees coming within Safety Zone (as per tree enumeration list). As per condition no (ii) of the Stage-I Approval order, these trees need to be protected. The trees are above 30cm and already established. It needs to be



protected against illicit felling and fire. Provisions are also to be elaborated for its protection.

4. Aims & objectives.

The aims & objectives of this scheme are as follows.

- ✓ To reduce / check biotic interference in the safety zone.
- ✓ Allow vegetation in safety zone to grow and have a dense crown.
- ✓ To have a Eco- friendly environment & a peaceful co-habitation.
- ✓ Check pollution, check & control fallout of mining activities outside the ML area.
- ✓ Protect the Green belt along the Sakat nala course.
- ✓ Protect the established (enumerated) trees against illicit felling and fire.
- ✓ Motivate land owners whose land is coming within SZ belt to plant fruit bearing trees in order to maintain a green belt all along the ML boundary.

5. A. For area under Govt. Ownership & Forest land: (To be treated under ANR Mode)

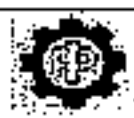
METHOD OF PLANTING.

(I) Choice of Species:

As outlined above the area (Government Land) will be treated under ANR (Aided Natural Regeneration) with planting of trees @600 plants per hectare. The species to be planted are

- 1) *Pongamia pinnata*. (Karanja)
- 2) *Simaruba glauca*. (Simaruba)
- 3) *Azadirachta indica*. (Neem)
- 4) *Ficus religiosa*. (Amra)
- 5) *Xylocarpus molle*. (Bora koli)
- 6) *Alstonia scholaris*. (Chatiana)
- 7) *Terminalia bellerica*. (Bahada)
- 8) *Dendrocalamus strictus*. (Banusa)
- 9) *Casia siamea*. (Sana chakunda)
- 10) *Santala santal* (Boda chakunda)
- 11) *Mangifera indica* (Aamta)
- 12) *Artocarpus heterophyllus* (Panasa)

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



5 (ii) 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: $2.06 \times 600 + 10\% \text{ extra} = 1360 \text{ no}$

b) Alignment and stacking and Pitting

This will be taken up in the month of March-April. Pit size: 30 Cm x 30cm x 30cm to be dug with a spacing of 2.5mt x 2.5mt @600 plants per hectare.

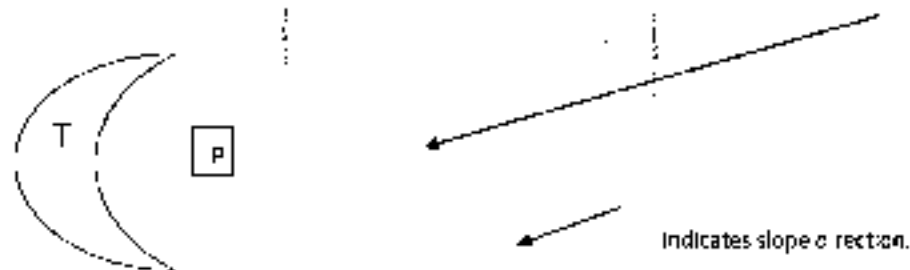
5(iii) PLANTING OPERATION.

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 @10gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

5 (iv) POST PLANTING OPERATION.

d) Weeding, Soil Working and Application of Fertilizer.

Post planting operation is most vital in success of any planting program. 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 is 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 1st & 2nd year of plantation.



T : Half moon trench

P: Plant position.



e) 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.

f) 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.

g) Watch and 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. As the area is very close to mine and labors are available round the clock and area is small the labors are also to be motivated to have vigil eye over the area against Fire, grazing and illicit felling.

h) Soil conservation measures.

Soil & Moisture Conservation is to be taken up as per the cost norm. Contour staggered Trenches / Loose Boulder structures are to be implemented in preference.

i) Tending Operation:

Due to protection by barbed wire fencing, damaged / stunted tree growths will come up. It is proposed to take up Silvicultural cleaning / tending operation in 2nd year so as to allow the natural growth establish and form a good crown. This operation includes singling of



shoots, cutting of climbers those are hindering with the growth of plants. Pruning is not recommended as thick foliage / branches will check dust pollution etc.

(The cost norm for ANR @600 plants per ha is at Annexure-I)

B. For Private land coming within SZ area.

On Safety Zone area there are private lands remaining vacant. In order to maintain a green belt, the land owners will be motivated to plant fruit bearing species of their choice. Two rows of plants at an interval of 3mx3m is suggested. Seedlings will be supplied by the user agency and financial assistance @Rs100/- per plant will be provided for planting and protection of trees by synthetic Wire mesh Gabion. The total plants likely to be planted is 1788 numbers.

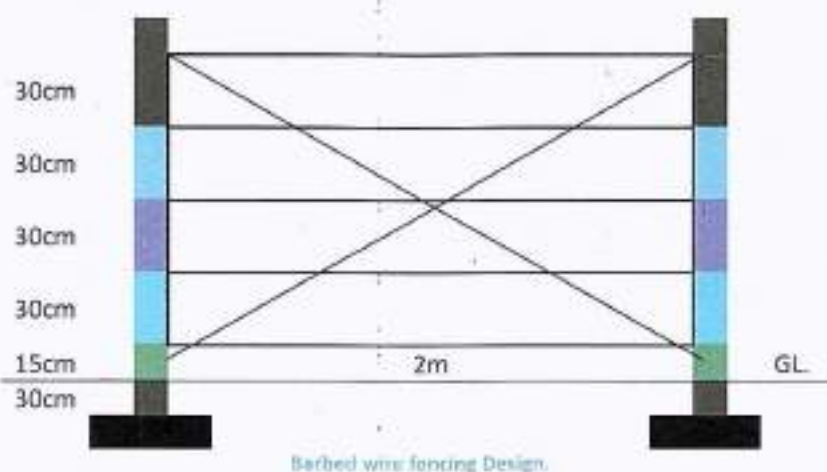
C. Barbed wire fencing:

The tree growth and planted seedlings need to be protected against grazing/ browsing and biotic interference.

The total length of Barbed wire fencing is 5027 meter (5.027 km). The location / position of fencing required is shown in the attached map. **(Annexure-II)**

Description of Barbed Wire Fencing.

It is suggested to put T shaped pillars at an interval of 2m. The length of such pillar is 2.10 m. (1.5m above the ground & 0.60m below the ground.) Size:15cmx10cm. The Lower bar of inverted "T" is of 30cm including the width of the pillar. There will be 5 strands of two ply barbed wire at a height of 15cm, 45cm, 75cm, 105cm, and 135cm. Two strands will be put diagonally (connecting 15cm point to 135 cm point & 135cm point to 15cm point)





Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



The Cost norm for barbed wire fencing is at Annexure- III.

D. Protection of Enumerated trees:

There are 54 trees on SZ area. The list of trees with GBH is at Annexure- IV. Each tree will be given a lime wash up to 2 feet from the base to prevent white ant attack. There will be double ring at Breast Height (Violate colour) to make it distinct. As trees will be within Barbed wire fencing, there is no threat from illicit felling. In case of any damage to trees caused due to Natural Calamity, it will be reported to Range Officer, Muniguda and DFO, Rayagada.

6. Cost Estimate.

The cost estimate for implementation of scheme is as given below.

Table 2 Cost estimate of the scheme

| Sl No | Item of Work | Area in Ha / Number of Plants | Rate in Rs | Amount in Rs | Remark. |
|-------|--|-------------------------------|--|-----------------------------|---------|
| 1 | ANR in SZ area / Green belt area @600 plants per ha | 2.06 | 52891/- | 108956 | |
| 2 | Plantation on SZ area under Private ownership. At a spacing of 3mx3m i.e. 1100 plants per ha | 1.625 ha= 1788 no | Seedling cost: Rs25/-
Planting & Protection: Rs110/-
= Rs135/- per plant | 241380 | |
| 3 | Protection of Enumerated trees on Safety Zone | 54 number | Rs25/- per plant per year for 10 year | 13500 | |
| 4 | Barbed wire Fencing | 5.027Rkm | Rs4.43lakh per RKM | 2226961 | |
| | Sub Total: | | | 2590797 | |
| | Add 20% for cost escalation: | | | 518159 | |
| | G. Total | | | 3108956/- or Say 31.09 lakh | |

(Thirty One Lakh Nine Thousand Only)

7. Phasing of Program.

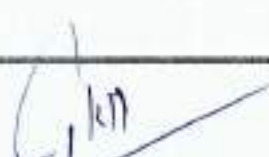
As per the Condition stipulated in the stage-I order, the work is to be completed within 3 years from date of issue of Stage-II order. Hence the work program is phased as follows.


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Technically approved for Rs. 31,09,000/-
(approx. Thirty one lakh Nine thousand) only

The scheme is verified and found correct technically


Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle


Regional Chief Conservator of Forests
KORAPUT CIRCLE



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



| Sl No | Work Description | Year of Execution. | | |
|-------|--|--------------------|--------------------|--------------------|
| | | 1 st Yr | 2 nd Yr | 3 rd Yr |
| 1 | ANR in SZ area / Green belt area –Pre planting operation | | | |
| 2 | Planting Operation | | | |
| | Post planting operation | | | |
| 3 | Plantation on SZ area under Private ownership. | | | |
| 4 | Barbed wire Fencing | | | |
| 5 | Protection of Enumerated trees on Safety Zone | | | |

(Colour box indicates year of Execution)

8. EXECUTION & MONITORING,

This activity will be executed by the user agency. The M/s Pradhan Industries have their own setup that can very well execute & supervise the work. It can be periodically monitored by the mine inspecting authorities and Forest Department authorities.

- Encl: 1. Annexure-I (Cost Norm for ANR @600 plants per ha)
2. Location map of Fencing & SZ area / Green belt area/ Private land under SZ area.
3. Cost estimate for Barbed wire fencing.
4. List of trees coming within SZ area as per enumeration list.



"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.
Consultant,


(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.
Consultant,


Signature of Project Proponent.


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION





Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



Annexure-I

Cost Norm For ANR (@600 Plants per Hectare)

For ten year maintenance.

Wage rate- @Rs224.30/-.

| Sl.No. | Item of Work | Preferable period of Execution | Person days | Labour (Rs) | Material (Rs) | Total (Rs) |
|----------------------------|---|--------------------------------|-------------|----------------|---------------|----------------|
| 0th Year | | | | | | |
| 1 | Survey, Demarcation and Pillar Posting, GPS Reading with mapping | Nov/ Dec | 2 | 448.6 | 0 | 448.6 |
| 2 | Site Preparation | Nov/ Dec | 2 | 448.6 | 0 | 448.6 |
| 3 | Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc. | Jan/ Feb | 5 | 1121.5 | 0 | 1121.5 |
| 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 660 seedlings (600+60) | Jan/ March | 16.5 | 3700.95 | 1102 | 4802.95 |
| 5 | Contingency and Unforeseen Expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 25.5 | 5719.65 | 1402 | 7121.65 |
| 1st Year | | | | | | |
| 1 | Nursery cost (6 months old seedling) balance part @ Rs 2.78 for 660 seedlings | Apr- Jul | 8 | 1794.4 | 235 | 2029.4 |
| 2 | Pitting 30 cm cube size | Feb/ Mar | 18 | 4037.4 | 0 | 4037.4 |
| 3 | Carriage and planting including casualty replacement | Jul/ Aug | 15 | 3364.5 | 0 | 3364.5 |
| 4 | Complete weeding, Soil working, manuring | Aug /Sep | 18 | 4037.4 | 0 | 4037.4 |
| 5 | Cost of Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 2400.00 and Granular insecticides 5 gms/plant @ Rs 80/- per Kg = Rs 240.00 | Aug /Sep | 0 | 0 | 2640 | 2640 |
| 6 | Cost of Chemical Fertilizer (a) Urea 70 gms/plant in two subsequent doses @ Rs 6/- per Kg = Rs 252.00 (b) NPK 50 gms/plant @ Rs 24/- per Kg = Rs 720.00 as basal dose | | 0 | 0 | 972 | 972 |
| 7 | Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoot etc. | Sep/Oct | 3 | 672.9 | 0 | 672.9 |



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



| | | | | | | |
|----------------------------|--|----------|------------|----------------|-------------|----------------|
| 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 | 15 | 3364.5 | 0 | 3364.5 |
| 9 | Fire line tracing and inspection path | Feb/ Mar | 20 | 4486 | 0 | 4486 |
| 10 | Watch & Ward | Aug- Mar | 7 | 1570.1 | 0 | 1570.1 |
| 11 | Contingency and unforeseen expenditure | | 0 | 0 | 500 | 500 |
| | Sub Total | | 104 | 23327.2 | 4347 | 27674.2 |
| 2nd Year | | | | | | |
| 1 | Casualty Replacement including cost of seedling, carriage and planting. | Jul/Aug | 3 | 672.9 | 567 | 1239.9 |
| 2 | Complete weeding and cultural operations | Sep/Oct | 6 | 1345.8 | 0 | 1345.8 |
| 3 | Soil working and manuring | Sep/Oct | 6 | 1345.8 | 0 | 1345.8 |
| 4 | Cost of Fertiliser and insecticide (a) Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 2400.00 (b) Granular insecticides 5 gms/plant for 60 plants 100 gms @ Rs 80/- per Kg = Rs 24.00 | Sep/Oct | 0 | 0 | 2424 | 2424 |
| 5 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 6 | Soil conservation measures(Renovation of staggered trenches etc.) | Sep/Oct | 6 | 1794.4 | 0 | 1794.4 |
| 7 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| 8 | Contingency and unforeseen expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 31 | 6953.3 | 3291 | 10244.3 |
| 3rd Year | | | | | | |
| 1 | Complete weeding and cultural operations | Aug /Sep | 3 | 672.9 | 0 | 672.9 |
| 2 | Soil working | Aug /Sep | 3 | 672.9 | 0 | 672.9 |
| 3 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 4 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| | Sub Total | | 14 | 3140.2 | 0 | 3140.2 |
| 4th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 5th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



| 6 th Year | | | | | | |
|-----------------------|---------------------------------------|----------|--------------|-----------------|-------------|-----------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 7 th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 8 th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 9 th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 10 th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| | Grand Total | | 195.5 | 43850.65 | 9040 | 52890.65 |

| ABSTRACT. | | | | |
|--------------|--------------|------------------|--------------------|----------------------------|
| Year | Person days | Labour Component | Material Component | Total |
| 0th Yr | 25.5 | 5719.65 | 1402 | 7121.65 |
| 1st yr | 104 | 23327.2 | 4347 | 27674.2 |
| 2nd Yr | 31 | 6953.3 | 3291 | 10244.3 |
| 3rd Yr | 14 | 3140.2 | 0 | 3140.2 |
| 4th Yr | 3 | 672.9 | 0 | 672.9 |
| 5th Yr | 3 | 672.9 | 0 | 672.9 |
| 6th Yr | 3 | 672.9 | 0 | 672.9 |
| 7th Yr | 3 | 672.9 | 0 | 672.9 |
| 8th Yr | 3 | 672.9 | 0 | 672.9 |
| 9th Yr | 3 | 672.9 | 0 | 672.9 |
| 10th Yr | 3 | 672.9 | 0 | 672.9 |
| Total | 195.5 | 43850.65 | 9040 | 52890.65 or 52891/- |



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District



ANNEXURE-III

ESTIMATE FOR BARBED WIRE FENCING FOR 100 Rmt./ 1 Kilometer

Wage Rate @224.30/Man day

| Particulars of work | Unit | Rate/ each in Rs. | Amount in Rs. |
|---|----------------|-------------------|-------------------------|
| 1-Cost of RCC fence post size 7" X 6" X 4"(1 post over 2 meter) including loading, unloading & transportation to site | 50 | 364.5 | 18225 |
| 2-Cost of Barbed wire for 100 Rmt with 7 layers parallel and cross section(100X7=700 Rmt -140 Kg.(5mtr=1Kg appx.) including transportation to site. | 140 | 105.75 | 14945 |
| 3-Fixing of RCC Pillar | 50 | 112.15 | 5607.5 |
| 4-Fixing barbed wire with fence post | 50 | 100.95 | 5047.5 |
| 5-Painting & numbering on L.S. | | | 472.8 |
| Total: | For 100 meters | | 44297.8 |
| | For 1 RKM | | 442978 or say 4.43 lakh |
| Rupees four lakh Forty Three Thousand only. | | | |



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



Annexure-IV.

| Tree Enumeratiuon List | | | | | | | |
|--|---------|----------|---------|------------------------------|-------------|--------------------|--------------------------|
| Coming within ML area of Bandhamandi Graphite Mine | | | | | | | |
| of M/s Pradhan Industries, Cuttack. | | | | | | | |
| Village- Bainibasa, Tahasil- Muniguda, District Rayagada | | | | | | | |
| Trees Within Safety Zone. | | | | | | | |
| Sl No | Plot No | Khata No | Tree No | Name of Species (Local Name) | GBH (in cm) | Bole height (in M) | Normal / Defective (N/D) |
| 1 | 64 | | 1 | Tentuli | 310 | 3.5 | N |
| 2 | 125 | | 2 | Jamun | 160 | 2.5 | D |
| 3 | 51 | | 3 | Mahula | 325 | 6.5 | D |
| 4 | | | 4 | Jamun | 130 | 4 | N |
| 5 | | | 5 | Dimiri | 72 | 6 | N |
| 6 | 42 | | 6 | Sal | 133 | 2.5 | N |
| 7 | | | 7 | Pipal | 340 | 9 | D |
| 8 | | | 8 | Pijuli | 30 | 2 | N |
| 9 | | | 9 | Neem | 96 | 3.2 | N |
| 10 | | | 10 | Bara | 290 | 4 | D |
| 11 | | | 11 | Aamba | 280 | 5.5 | N |
| 12 | | | 12 | Aamba | 120 | 3.8 | N |
| 13 | | | 13 | Aamba | 80 | 3 | N |
| 14 | | | 14 | Aamba | 84 | 3.5 | N |
| 15 | | | 15 | Aamba | 410 | 9 | D |
| 16 | | | 16 | Aamba | 260 | 5 | N |
| 17 | | | 17 | Aamba | 385 | 5.5 | N |
| 18 | | | 18 | Aamba | 290 | 5.5 | N |
| 19 | | | 19 | Aamba | 278 | 4.5 | N |
| 20 | | | 20 | Aamba | 325 | 6.5 | N |
| 21 | | | 21 | Bara | 170 | 4 | N |
| 22 | | | 22 | Bara | 215 | 3 | N |
| 23 | 123 | | 23 | Bara | 340 | 6 | D |
| 24 | | | 24 | Tentuli | 314 | 5 | N |
| 25 | | | 25 | Tentuli | 113 | 3 | N |



Scheme for Fencing, Protection and regeneration of the safety zone area in respect of Bainibasa Graphite Mines of M/s Pradhan Industries, in Rayagada District.



| | | | | | | |
|----|-----|----|-------------|-----|-----|---|
| 26 | | 26 | Tentuli | 68 | 2.5 | N |
| 27 | | 27 | Aamba | 290 | 5 | N |
| 28 | | 28 | Aamba | 340 | 6 | N |
| 29 | | 29 | Aamba | 338 | 7.5 | N |
| 30 | | 30 | Aamba | 470 | 6 | D |
| 31 | | 31 | Aamba | 340 | 6.5 | N |
| 32 | | 32 | Aamba | 410 | 7 | N |
| 33 | | 33 | Aamba | 320 | 6 | N |
| 34 | | 34 | Aamba | 340 | 6 | D |
| 35 | | 35 | Pipal | 380 | 5.5 | D |
| 36 | | 36 | Bela | 30 | 1.2 | N |
| 37 | | 37 | Simili | 74 | 4 | N |
| 38 | | 38 | Aamba | 390 | 8 | D |
| 39 | | 39 | Aamba | 370 | 7 | D |
| 40 | | 40 | Pipal | 320 | 4 | D |
| 41 | | 41 | Pipal | 360 | 6 | D |
| 42 | | 42 | Aamba | 420 | 6.5 | D |
| 43 | 111 | 43 | Jamun | 30 | 1.3 | N |
| 44 | | 44 | Kumbhi | 76 | 2.6 | N |
| 45 | | 45 | Kaintha | 98 | 1.6 | D |
| 46 | | 46 | Pani Dimiri | 30 | 2.5 | N |
| 47 | | 47 | Pani Dimiri | 90 | 3 | N |
| 48 | | 48 | Barkoli | 35 | 2 | N |
| 49 | | 49 | Pani Dimiri | 30 | 1.5 | N |
| 50 | | 50 | Tentuli | 280 | 3.5 | D |
| 51 | | 51 | Mahula | 330 | 6 | N |
| 52 | | 52 | Salapa | 170 | 4 | N |
| 53 | | 53 | Kusum | 175 | 3.6 | N |
| 54 | | 54 | Aamba | 405 | 6.5 | N |

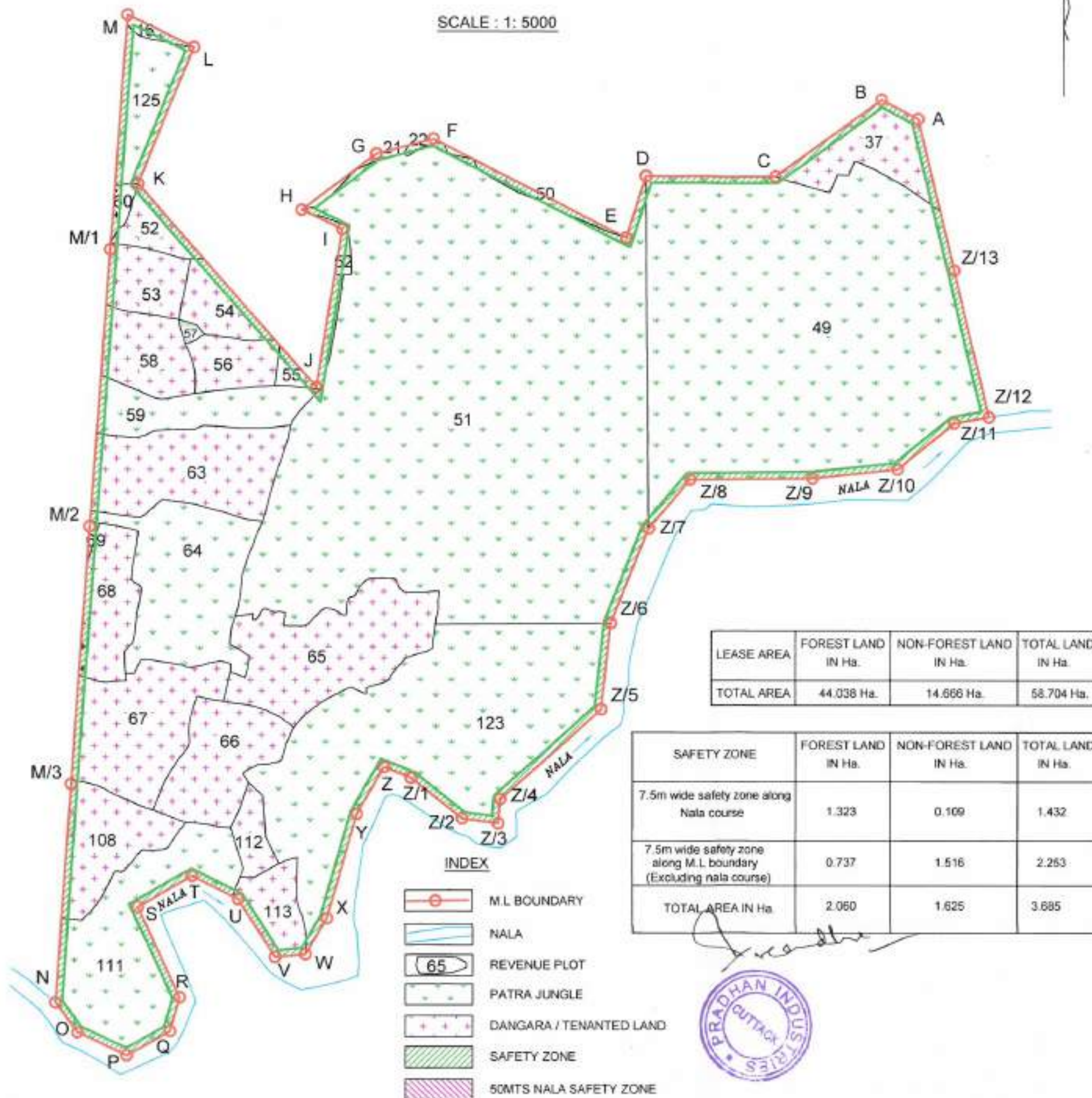
(NB: No tree on Plot No 59)



LOCATION MAP SHOWING - SAFETY ZONE AREA / GREEN BELT AREA AND TENANTED LAND
UNDER SAFETY ZONE IN M L AREA OF BAINIBASA GRAPHITE MINE OF M/s. PRADHAN INDUSTRIES
IN VILLAGE - BAINIBASA UNDER MUNIGUDA - TAHASIL OF RAYAGADA DISTRICT, ODISHA

SCALE : 1: 5000

N



Annexure - H(1)

Condition no. (xx) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

SCHEME FOR Afforestation on degraded forest land identified in Jambragurha PRF under Muniguda Range of Rayagada Division measuring one & half times of safety zone area in Bainibasa Graphite Mines of M/S Pradhan Industries In Rayagada District, Odisha.

(Safety Zone area: 0.737ha 1 & ½ Times of SZ area: 1.11ha)

As per the approved cost norm for ANR @600 seedlings per hectare @Rs286.30 wage rate over 1.11 Ha @ Rs 68084/- per hectare for ten years comes to Rs 75573/- . The cost norm is at Annexure-II.

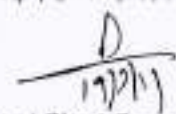
(Rupees Seventy Five thousand Five hundred and Seventy three only)

Submitted


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Approved for Rs 75,573/-

(Rupees Seventy five thousand Five hundred Seventy three) only.


Regional Chief Conservator of Forests
KORAPUT CIRCLE

USER AGENCY



Page | 1





Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainibasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



SCHEME FOR

Afforestation on degraded forest land identified in Jambragurha PRF under Muniguda Range of Rayagada Division measuring one & half times of safety zone area
As it pertains to Diversion of 44.038ha of Forest land in Bainibasa Graphite Mines of M/S Pradhan Industries In

Rayagada District, Odisha.

Safety Zone area: 0.737ha

1& ½ Times of SZ area: 1.11ha

Compliance to:

Condition no. (xx) of in-principle Approval order vide F.No.8-58/2017-FC Dated 22nd January,2018 by MoEF & CC, Govt. of India, New Delhi.



SCHEME FOR AFFORESTATION ON DEGRADED FOREST LAND OVER ONE AND HALF TIMES OF SAFETY ZONE AREA OF BAINIBASA GRAPHITE MINE OF PRADHAN INDUSTRIES. IN RAYAGADA DISTRICT, ODISHA.

1. Introduction:

Bainibasa Graphite Mining Lease over an area of 58.704ha at village Bainibasa under Muniguda Tahasil of Rayagada District has been granted by Steel & Mines Department, Government of Odisha vide No Proceedings No II (GR) SM-01/2017/379/SM Dated 10.01.2017 and lease deed has been executed on 11th January/2017. The ML area contains 44.038ha of Revenue Forest Land and lessee has applied for approval u/s 2(ii) of the Forest (Conservation) Act, 1980 vide proposal No FP/OR/MIN/24824/2017. The MoEF&CC, New Delhi, Government of India has issued "In Principle Approval Order" vide F.No 8-58/2017-FC Dated 22nd January, 2018.

In the "In Principle Approval Order" a set of stipulated conditions has been set out by the MoEF&CC, New Delhi for compliance before issue of Final Approval Order "Stage-II Order". The Condition (xx) of Para-2 reads as follows.

Condition no (xx): *"Fencing, protection and regeneration of the safety zone area [7.5 meters strip shall be kept within the mining lease boundary and area of the Safety Zone shall be part of the total area of the mining lease as per the Ministry's guidelines dated 27.05.2015] shall be done within three year at the project cost from 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 Stage-II clearance and maintained thereafter in accordance with the approved plan in consultation with the State Forest Department."*

This condition deals with two different matters i.e.

- i. Fencing, protection and regeneration of the safety zone area i.e. 7.5 meters strip all along the mining lease boundary to be carried out within three year at the project cost from issue of Stage-II Clearance.
- ii. 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 within three years from the date of Stage-II clearance and maintained thereafter. Shape file of the DFL area selected will be submitted to MoEF&CC.

This Scheme is prepared to comply the second part of the condition i.e. *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;*



2. Identification of the degraded forest area:

The degraded forest land for this purpose has been identified in Jambragurha PRF over 1.11ha in consultation with DFO, Rayagada Division. The location details of site selected is as follows:

| | |
|--|----------------------------------|
| Forest Division | Rayagada |
| Forest Range | Muniguda |
| Name of Forest | Jambragurha PRF |
| Soil quality | Rocky lateritic soil |
| Crop Density of the vegetation of the site | 0.2 to 0.3 |
| Vegetation | Dry deciduous miscellaneous crop |
| Area to be covered | 1.5 times of 0.737ha = 1.11 ha |

Table 1 Location details of site

3. Objectives:

As mentioned in the introductory paragraph, this scheme aims to comply the condition no (xx) of Para 2 as stipulated vide letter No.F-8-58/2017-FC dtd.22.01.2018 of MoEF&CC, New Delhi. The degraded forest is to be restocked by Aided Natural Regeneration i.e. Silvicultural tending operation for existing growth supplemented with planting in blank area inside the selected patch. It also aims to carry out necessary soil & moisture conservation measures along with site specific Afforestation programme to conserve soil, water for 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.

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

4. Technique to be adopted.

As the vegetation is of dry deciduous and degraded one, it is proposed to take up Aided Natural Regeneration with planting of 600 plants per hectare. The spacing on available space will be of 2.5mt x 2.5mt. The extent of area is 1.11ha. The area selected for ANR treatment is very adjacent to ANR site selected by Range Officer, Muniguda for 2018-19 planting program. As the area required is small one it will be better if selected and implemented to some planting site. This plantation is to be maintained for a period of 10 years to achieve the objectives.

4.(A) Survey, Demarcation, Pillar posting.

The identified area as shown in the Map / KML file is to be demarcated and pillars to be posted as per provisions of Cost norm.



4.(B) Re-generation, Cleaning & Tending operation.

The area aimed to be improved through ANR contains vegetation with average crop density of 0.2 to 0.3 with top height about 6m. The natural species available are Sal, Karada, Senha, Chara, Kendu, Asan, Dhaura etc. all are of dry tract species.

The existing crop needs 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. High stumps required to be cut back to a height below 30cm. As no conspicuous climbers are noticed, no climber cutting is recommended. Eradication of weeds mostly eupatorium is required 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. The best time to take up the silvicultural cleaning operation is from November – February i.e. in winter.

4.(C). Plantation.

Attempts will be made to plant indigenous species that can withstand over head sunlight, moisture stress condition and preferable non-browseable 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*. (Karanja)
2. *Simarouba glauca*. (Simarouba)
3. *Azadirachta indica*. (Neem)
4. *Emblica officinalis*. (Amla)
5. *Xyziplus moritiana*. (Barkoli)
6. *Dalbergia latifolia*. (Pahadi sisoo)
7. *Alstonia scholaris*. (Chalonia)
8. *Terminalia belerica*. (Bahada)
9. *Dyospyros melanoxylon*. (Kendu)
10. *Dendrocolumus strictus*. (Bamboo) etc

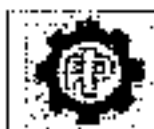
Before taking of plantation the following Pre-planting operation are required to be taken up.

Pre-Planting Operation

a) Raising of nursery

As planting will be taken up in ANR mode with 600 plants per ha and 1.11 ha planting is required it is suggested to procure seedlings from a good nursery with prior order about species / height of seedlings etc. Total number of Seedlings required is $1.11 \times 600 + 10\%$ of 666 = 733 seedlings.

b) Allignment 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 spacing of 2.5mt x 2.5mt in blank spaces available in the selected area.

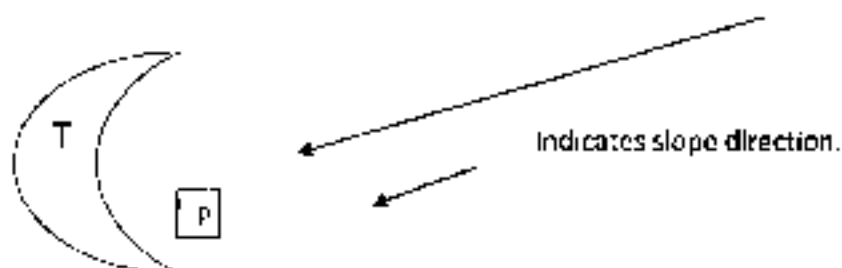
Planting Operation.

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 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

Post Planting Operation.

d) 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 1st & 2nd year of plantation.



T : Half moon trench

P: Plant position.

e) 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.

f) 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



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainibasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



back materials and dry leaves along with fire lines should be separated and dumped in pits outside the plantation area.

g) Watch and 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.

h) 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.



5. Executing agency

This programme will be implemented by State Forest Department through the Divisional Forest Officer, Rayagada Division.

6. Financial forecast

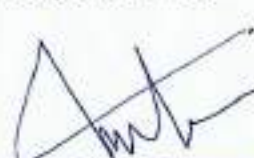
As per the approved cost norm for ANR @600 seedlings per hectare over 1.11 Ha @ Rs 52891/- per hectare for ten years comes to Rs 58709.01 or 58710/- . The cost norm is at Annexure-II.

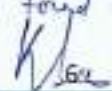
7. Inspection monitoring and evaluation.

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

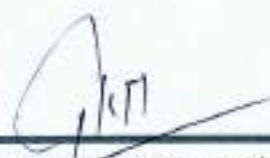
Encl:

1. Location Map 1:10000 scale. Annexure-I
2. Cost norm. Annexure-II
3. KML Shape file in CD.


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

*Technically approved for Rs. 58,710/-
(As per Fifty eight thousand Seven hundred Ten only)*
*The scheme is verified
and found correct technically.*


Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle
K.O.B. & P.O.


Regional Chief Conservator of Forests
KORAPUT CIRCLE



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainibasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



"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,
Consultant,

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests,
Consultant,



Signature of Project Proponent.

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION





Annexure-II

Cost Norm For ANR (@600 Plants per Hectare)

For ten year maintenance.

Wage rate- @Rs224.30/-.

| Sl.No. | Item of Work | Preferable period of Execution | Person days | Labour (Rs) | Material (Rs) | Total (Rs) |
|----------------------------|---|--------------------------------|-------------|----------------|---------------|----------------|
| 0th Year | | | | | | |
| 1 | Survey, Demarcation and Pillar Posting, GPS Reading with mapping | Nov/ Dec | 2 | 448.6 | 0 | 448.6 |
| 2 | Site Preparation | Nov/ Dec | 2 | 448.6 | 0 | 448.6 |
| 3 | Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc. | Jan/ Feb | 5 | 1121.5 | 0 | 1121.5 |
| 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 660 seedlings (600+60) | Jan/ March | 16.5 | 3700.95 | 1102 | 4802.95 |
| 5 | Contingency and Unforeseen Expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 25.5 | 5719.65 | 1402 | 7121.65 |
| 1st Year | | | | | | |
| 1 | Nursery cost (6 months old seedling) balance part @ Rs 2.78 for 660 seedlings | Apr- Jul | 8 | 1794.4 | 235 | 2029.4 |
| 2 | Pitting 30 cm cube size | Feb/ Mar | 18 | 4037.4 | 0 | 4037.4 |
| 3 | Carriage and planting including casualty replacement | Jul/ Aug | 15 | 3364.5 | 0 | 3364.5 |
| 4 | Complete weeding, Soil working, manuring | Aug /Sep | 18 | 4037.4 | 0 | 4037.4 |



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainihasa Graphite Mine of Pradhan Industries, In Rayagada district, Odisha.



| | | | | | | |
|----------------------------|---|----------|------------|----------------|-------------|----------------|
| 5 | Cost of Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 2400.00 and Granular insecticides 5 gms/plant @ Rs 80/- per Kg = Rs 240.00 | Aug /Sep | 0 | 0 | 2640 | 2640 |
| 6 | Cost of Chemical Fertilizer
(a) Urea 70 gms/plant in two subsequent doses @ Rs 6/- per Kg = Rs 252.00
(b) NPK 50 gms/plant @ Rs 24/- per Kg = Rs 720.00 as basal dose | | 0 | 0 | 972 | 972 |
| 7 | Silvicultural Operation involving clearance of weeds, cutting of climbers, singling of shoot etc. | Sep/Oct | 3 | 672.9 | 0 | 672.9 |
| 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 | 15 | 3364.5 | 0 | 3364.5 |
| 9 | Fire line tracing and inspection path | Feb/ Mar | 20 | 4486 | 0 | 4486 |
| 10 | Watch & Ward | Aug- Mar | 7 | 1570.1 | 0 | 1570.1 |
| 11 | Contingency and unforeseen expenditure | | 0 | 0 | 500 | 500 |
| | Sub Total | | 104 | 23327.2 | 4347 | 27674.2 |
| 2nd Year | | | | | | |
| 1 | Casualty Replacement including cost of seedling, carriage and planting. | Jul/Aug | 3 | 672.9 | 567 | 1239.9 |
| 2 | Complete weeding and cultural operations | Sep/Oct | 6 | 1345.8 | 0 | 1345.8 |
| 3 | Soil working and manuring | Sep/Oct | 6 | 1345.8 | 0 | 1345.8 |



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainibasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



| | | | | | | |
|----------------------------|--|----------|-----------|---------------|-------------|----------------|
| 4 | Cost of Fertiliser and insecticide (a)
Vermi compost @ 200 gms/plant @ Rs 20/- per Kg = Rs 2400.00 (b)
Granular insecticides 5 gms/plant for 60 plants 100 gms @ Rs 80/- per Kg = Rs 24.00 | Sep/Oct | 0 | 0 | 2424 | 2424 |
| 5 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 6 | Soil conservation measures(Renovation of staggered trenches etc.) | Sep/Oct | 8 | 1794.4 | 0 | 1794.4 |
| 7 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| 8 | Contingency and unforeseen expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 31 | 6953.3 | 3291 | 10244.3 |
| 3rd Year | | | | | | |
| 1 | Complete weeding and cultural operations | Aug /Sep | 3 | 672.9 | 0 | 672.9 |
| 2 | Soil working | Aug /Sep | 3 | 672.9 | 0 | 672.9 |
| 3 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 4 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| | Sub Total | | 14 | 3140.2 | 0 | 3140.2 |
| 4th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 5th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Bainibasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



6th Year

| | | | | | | |
|---|---------------------------------------|----------|----------|--------------|----------|--------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |

7th Year

| | | | | | | |
|---|---------------------------------------|----------|----------|--------------|----------|--------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |

8th Year

| | | | | | | |
|---|---------------------------------------|----------|----------|--------------|----------|--------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |

9th Year

| | | | | | | |
|---|---------------------------------------|----------|----------|--------------|----------|--------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |

10th Year

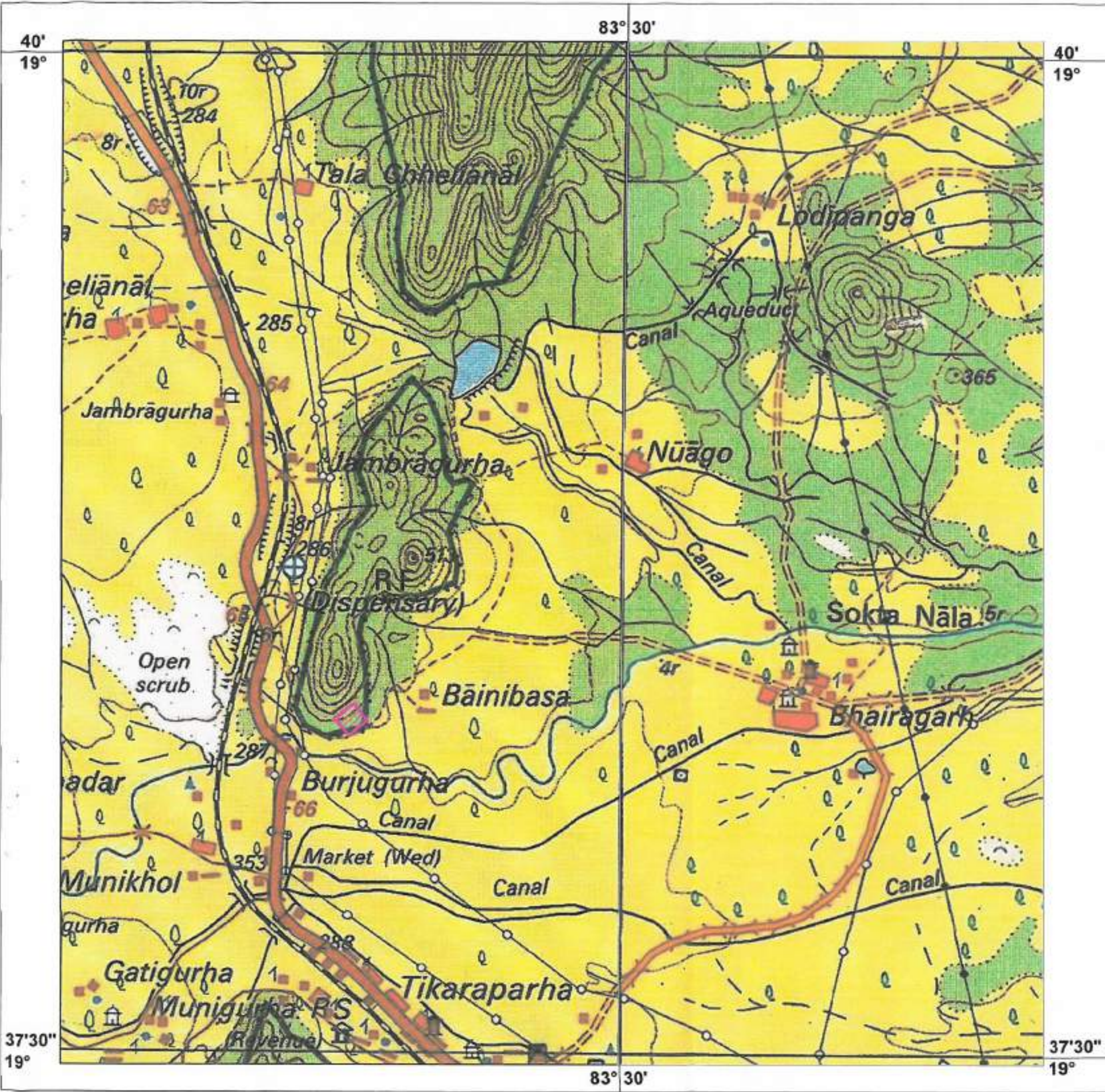
| | | | | | | |
|---|---------------------------------------|----------|--------------|-----------------|-------------|-----------------|
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| | Grand Total | | 195.5 | 43850.65 | 9040 | 52890.65 |



Scheme for Afforestation on Degraded Forest Land Over One and Half times of Safety Zone area of Mainbasa Graphite Mine of Pradhan Industries, in Rayagada district, Odisha.



| ABSTRACT. | | | | |
|-----------|-------------|------------------|--------------------|------------------------|
| Year | Person days | Labour Component | Material Component | Total |
| 0th Yr | 25.5 | 5719.65 | 1402 | 7121.65 |
| 1st yr | 104 | 23327.2 | 4347 | 27674.2 |
| 2nd Yr | 31 | 6953.3 | 3291 | 10244.3 |
| 3rd Yr | 14 | 3140.2 | 0 | 3140.2 |
| 4th Yr | 3 | 672.9 | 0 | 672.9 |
| 5th Yr | 3 | 672.9 | 0 | 672.9 |
| 6th Yr | 3 | 672.9 | 0 | 672.9 |
| 7th Yr | 3 | 672.9 | 0 | 672.9 |
| 8th Yr | 3 | 672.9 | 0 | 672.9 |
| 9th Yr | 3 | 672.9 | 0 | 672.9 |
| 10th Yr | 3 | 672.9 | 0 | 672.9 |
| Total | 195.5 | 43850.65 | 9040 | 52890.65 or
52891/- |



1.11 Ha. DEGRADED FOREST LAND

TOPO SHEET NO :- E 44 F6 (65 M/6)
E 44 F10 (65 M/10)

MAP SHOWING THE LOCATION OF 1.11 Ha. DEGRADED FOREST LAND SELECTED IN JUMURGADA PRF FOR TAKING OF PLANTATION (1 & 1/2 TIMES) OF SAFETY ZONE

LOCATION MAP

R.F. 1:20,000

Signature



Condition no. (xxxii) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, 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 100 meters from outer perimeter of Bainibasa Graphite mining lease of M/s Pradhan Industries.

Revised Financial Outlay @ Rs 286.30 per Day.

1. 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 Rs55675/- per ha. Therefore the total financial outlay comes to Rs 55677/- X 7.404ha =Rs 4,12,233/-.

2. Vegetative fencing for 126 m in revised wage rate comes to Rs.33682/- i.e. per meter Rs267.32 (Annexure-I)

| Sl No | Item of Work | Rate in Rs | Quantum | Amount in Rs |
|-------|--|------------|---------|----------------|
| 1 | plantation in ANR mode @400 seedlings per hectare | 55677 | 7.404ha | 412233 |
| 2 | Vegetative fencing per meter.(with 3 year maintenance) | 267.32 | 3611 m | 965293 |
| | S. Total | | | 1377526 |
| | Add 20% excess for cost escalation | | | 275505 |
| | Total | | | 1653031 |

(Rupees Sixteen Lakh fifty three thousand thirty one only)

Submitted

USER AGENCY

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

Approved for Rs 16,53,031/-
(Rupees Sixteen Lakh Fifty three thousand thirty one) only.

Regional Chief Conservator of Forests



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 Bainibasa Graphite mining lease. of M/s Pradhan Industries.



Compliance to:

Condition no. (xxxii) of in-principle Approval order vide F.No.8-58/2017-FC

Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTRS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



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

Bainibasa Graphite Mining Lease over an area of 58.704ha at village Bainibasa under Muniguda Tahasil of Rayagada District has been granted by Steel & Mines Department, Government of Odisha vide Proceedings No II (GR) SM-01/2017/379/SM Dated 10.01.2017 and lease deed has been executed on 11th January'2017. The ML area contains 44.038ha of Revenue Forest Land and lessee has applied for approval u/s 2(ii) of the Forest (Conservation) Act, 1980 vide proposal No FP/OR/MIN/24824/2017. The MoEF&CC, New Delhi, Government of India has issued "In Principle Approval Order" vide F.No B-58/2017-FC Dated 22nd January, 2018.

In the "In Principle Approval Order" a set of Stipulated conditions has been set out by the MoEF&CC, New Delhi for compliance before issue of Final Approval Order "Stage-II Order". The Condition (xxxii) of Para-2 reads as follows.

Condition (xxxii): "The 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 0.4), if any, located in the area within 100m 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 Bainibasa Graphite Mines of M/s Pradhan Industries, it is observed that area around Bainibasa Graphite Mining lease is mostly barren land with few trees / bushes belonging to Private / Government. There is Revenue Forest plots partly inside & partly Outside of the ML area. This revenue forest comes with a 100m zone and crop density is less than 0.4, hence suitable for treatment under this stipulated conditions. There are very small patches which is not suitable for treatment and from management point of view.



**SCHEME FOR GAP PLANTING, SOIL & WDISTUNE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



Applied M.L area represents a mild sloping topography as well as plain land bisected by the seasonal nalas flowing along west-east. General slope of the area is due east. The highest and lowest altitudes are at 361mRL and 334mRL. The elevation difference is $361 - 334 = 27\text{m}$

Soil.

Soil with alluvium is seen on the surface in the entire M.L area and forest area outside the boundary excluding nala course. Some area containing stones / boulders are also seen.

Climate.

The Bainbasa M.L area in Rayagada district experiences an extreme type of climate with hot & dry summer (Preferably in April - May) and very cold in winter (in December and January). Average rain fall recorded for the area is around 1400mm. Humidity in the area varies from 40% to 90%.

Drainage.

There is no perennial nala in the applied M.L area. The natural drainage system is distinct and dendritic in nature. Seasonal nala starts from the western side and passes through the M.L area along west-east direction. A perennial nala, namely Sakata nala starting from Nimagiri hill range flows outside the applied M.L area along the southern boundary from west to east and joins with Vamsadhara Nadi in east. The confluence point of Sakata nala and Vamsadhara Nadi exists at a linear distance of 4 km due east.

Vegetation:

The selected area bears bushy thorny growth. Tree species available area Sal, Jamun, Kendu, Barkoli, Dhaura, Senha, Amba, Eucalyptus, Mundi, Banada, Asana, Karada etc. All are in stunted height due to biotic pressure.

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 400 plants per hectare is suggested and appropriate scheme is prepared as follows.

The Location map is enclosed at Annexure-I.

3. Aims & Objectives:

As mentioned in the introductory paragraph, this scheme aims to comply the condition no. (xxxii) imposed vide letter F. No 8-58/2017 FC Dated 22nd January, 2018 of MoEF & Climate



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



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 & Moisture 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.

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

- Improvement of the micro edaphic condition,
- Checking of further degradation of the area & vegetation,
- Employment generation for the local people mainly to ST/SC,
- Awareness of villagers will be boosted for protection of planted area and other areas of the forest land

4. Area to be covered:

The area coming within 100m of the boundary area are in small and scattered patches. The area which is more than 1 hectare is only taken in to consideration for practical management point of view.

Area to be covered is 7.404ha distributed in three patches as follows.

| Sl No | Plot No coming within 100 m from outer periphery of ML area. | Area in Ac | Area in Ha | Kssam of the land. | Patch No as indicated on annexed map. | Periphery for fencing Except ML boundary line in meter |
|-------|--|------------|------------|--------------------|---------------------------------------|--|
| | Village- Bainbasa | | | | | |
| | 49(P) | 4.285 | 1.734 | Patra Jungle | P-I | 387 |
| | 59(P) | 1.459 | 0.590 | Patra jungle | P-II | 1920 |
| | 125(P) | 7.416 | 3.001 | Bada Jungle | | |
| 4 | 15(F) | 1.528 | 0.618 | Patra Jungle | | |
| | 62 | 0.52 | 0.210 | Patra Jungle | | |
| | Village- Bhainbaga | | | | | |
| | 81(P) | 3.09 | 1.251 | Patra Jungle | P-III | 1304 |
| | Total | 18.298 | 7.404 | | | 3611 meter or 3.611km |

Table 1. Forest Area within 100m covered & Patch No



SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MIS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.



4[i] 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 7.40411a 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.

a) Survey, Demarcation, Pillar posting.

The area to be surveyed by GPS and Stone cairn pillars of 60cm height 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.

b) Re-generation, Cleaning, Tending operation.

The area aimed to be improved through ANR contains vegetation with average crop height of 2 /3 meter with bushes.

The existing crops need tending for their healthy growth. It needs removal of diseased, dead, broken, malformed, defective tree growth. This is to be followed by removal of the same from the site to a safer place.

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 January- March.

c) 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 the visit and observation in the field the following species are proposed to be planted.

1. *Pongamia pinnata*. (Karanja)
2. *Simarouba glauca*. (Simarouba)
3. *Azadirachta indica*. (Neem)
4. *Ficus religiosa*. (Amra)
5. *Xylocarpus molle*. (Bara Kail)
6. *Albizia leucacantha*. (Chaitanya)
7. *Terminalia catappa*. (Banaba)
8. *Dyospyros melanoxylon*. (Kendu)
9. *Dendrocalamus strictus*. (Banusa) Etc
10. *Cassia siamea*. (Sana Chakhunda)



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

4(ii) 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: $9.637 \times 400 + 10\% \text{ extra} = 4240 \text{ no.}$

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 to be dugout with a spacing of 2.5mt x 2.5mt @400 plants per hectare.

4 (iii) 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 @10gm per pit. Casualty replacement is to be taken up during 1st year of plantation just after one month of planting. 10% causality replacement is also suggested during 2nd Year.

4 (iv) Post Planting Operation.

d) Weeding, soil working and manuring

Post planting operation is most vital in success of any planting program. It is proposed to carry out two weeding, soil working and manuring 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 is 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 1st & 2nd year of plantation.



e) 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.

f) 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.

g) Watch and 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. As the area is very close to mine and labors are available round the clock and area is small the labors are also to be motivated to have vigil eye over the area against Fire, grazing and illicit felling.

h) Brushwood / Vegetative fencing.

It is proposed to provide brushwood / vegetative fencing around the three patches mentioned above along with strengthened by planting of bamboo and other seedlings in two rows. Bamboo is to be planted at 2 meters spacing in staggered manner on the two rows, and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2m apart. at 2 meters spacing in staggered manner on the two rows, and the rest of the species to be planted at 1/2 meter spacing along the two rows, the rows being 2m apart. For 126m length the cost estimate as given in Bald hill plantation model is as follows.



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



Cost norm for Vegetative fencing. For 126 meter. (Wage rate=Rs224.30)

| C th
Year | Fencing
(i) For an average of 126
meters/ha @ Rs.56.57/- per meter
for bamboo twigs and bamboo
thorn fencing (L:M=40:60)
(ii) To be strengthened by planting
of bamboo and other seedlings in
two rows. Bamboo to be planted at
2 meters spacing in staggered
manner on the two rows, and the
rest of the species to be planted at
1/2 meter spacing along the two
rows, the rows being 2m apart.
Thus 500 plants (125 bamboo and
375 others) to be planted in two
rows to cover 125 m of
periphery/ha by the vegetative
fence
(Bamboo seedlings @ Rs.9.45 per
seedling X 125 = Rs.1181.00,
Agave seedling @ Rs.3.50 per
seedling X 375 = Rs.1312.00) | June-
Sept | | | | |
|-------------------------|--|---------------|--------|--------|--------|--------|
| | | 19 | 4261.7 | 4280 | 8541.7 | |
| | | June-
Sept | 11 | 2467.3 | 2493 | 4960.3 |
| 1 st
year | Repair and maintenance of bamboo fence
including material cost | Aug-
Oct | 15 | 1364.5 | 2540 | 5904.5 |
| 2 nd
year | Repair and maintenance of bamboo fence
including material cost | Aug-
Oct | 15 | 1364.5 | 2540 | 5904.5 |
| 3 rd
year | Repair and maintenance of bamboo fence
including material cost | Aug-
Oct | 13 | 2915.9 | | 2915.9 |
| | Total | | | 16374 | 11852 | 28227 |

For creation & maintenance of Vegetative fencing with strengthening with bamboo planting up to end of 3rd year maintenance comes to Rs 28227/- over 126 meter. Hence per Running meter it comes to Rs 224.023. Hence for a length 3.611 km, the estimated cost comes to $3611 \times 224.02 = \text{Rs } 808936/-$



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



5. Soil conservation measures.

Soil & Moisture Conservation is to be taken up as per the cost norm. Contour staggered Trenches / Loose Boulder structures are to be implemented in preference.



6. Executing agency

This program will be implemented by the Forest Department under supervision of Divisional Forest Officer, Rayagada Division.



SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.



7. Inspection monitoring and evaluation

The plantation is to be periodically inspected by the authority & Plantation Journal is to be maintained as per prevailing practice of Forest department.

8. 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 43021/- per ha. Therefore the total financial outlay comes to Rs 43023/- X 7.404ha =Rs 318528/-.

| Sl No | Item of Work | Rate in Rs | Quantum | Amount in Rs |
|-------|--|------------|---------|----------------------|
| 1 | plantation in ANR mode @400 seedlings per hectare | 43023/- | 7.404ha | 318528 |
| 2 | Vegetative fencing per meter.(with 3 year maintenance) | 224.023 | 3611 m | 808936 |
| | S. Total | | | 1127464 |
| | Add 20% excess for cost escalation | | | 225492.8 |
| | Total | | | 1352957 or 13.53lakh |

(Rupees Thirteen lakh Fifty Three Thousand only)

Encl:

- 1) Location Map – Annexure-I
- 2) Cost norm for ANR @400 plants per hectare. –Annexure-II


DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

*Technically approved for Rs.13,53,000/-
(Rupees Thirteen lakh fifty three thousand) only*

*The scheme is verified
and found correct technically.*


Asst. Conservator of Forests
O/o R.C.C.F., Koraput Circle
KORAPUT


Regional Chief Conservator of Forests
KORAPUT CIRCLE



SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.



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.

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.



Signature of Project Proponent.

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**





**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



Annexure –II

Cost Norm For ANR (@400 Plants per Hectare)

For ten year maintenance.

Wage rate- @Rs224.30/-.

| Sl.No. | Item of Work | Preferable period of Execution | Person days | Labour (Rs) | Material (Rs) | Total (Rs) |
|----------------------------|---|--------------------------------|-------------|-------------|---------------|-------------|
| 0th Year | | | | | | |
| 1 | Survey, Demarcation and Pillar Posting, GPS Reading with mapping | Now/ Dec | 2 | 448.6 | 0 | 448.6 |
| 2 | Site Preparation | Now/ Dec | 2 | 448.6 | 0 | 448.6 |
| 3 | Silvicultural Operation including clearance of weed, climber cutting, high stump cutting, singling of shoots etc. | Jan/ Feb | 5 | 1121.5 | 0 | 1121.5 |
| 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 | 2467.3 | 735 | 3202.3 |
| 5 | Contingency and Unforeseen Expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 20 | 4486 | 1035 | 5521 |
| 1st Year | | | | | | |
| 1 | Nursery cost (6 months old seedling) balance part @ Rs 2.78 for 440 seedlings | Apr- Jul | 5 | 1121.5 | 223 | 1344.5 |
| 2 | Pitting 30 cm cube size | Feb/ Mar | 12 | 2691.6 | 0 | 2691.6 |
| 3 | Carriage and planting including casualty replacement | Jul/ Aug | 10 | 2243 | 0 | 2243 |
| 4 | Complete weeding, Soil working, manuring | Aug /Sep | 12 | 2691.6 | 0 | 2691.6 |
| 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 |



SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.



| | | | | | | |
|----------------------|---|----------|----|---------|------|---------|
| 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 | 3364.5 | 0 | 3364.5 |
| 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 | 4486 | 0 | 4486 |
| 9 | Fire line tracing and
inspection path | Feb/ Mar | 3 | 672.9 | 0 | 672.9 |
| 10 | Watch & Ward | Aug- Mar | 7 | 1570.1 | 0 | 1570.1 |
| 11 | Contingency and unforeseen
expenditure | | 0 | 0 | 500 | 500 |
| | Sub Total | | 84 | 18841.2 | 3131 | 21972.2 |
| 2 nd Year | | | | | | |
| 1 | Casualty Replacement
including cost of seedling,
carriage and planting. | Jul/Aug | 2 | 448.6 | 378 | 826.6 |
| 2 | Complete weeding and
cultural operations | Sep/Oct | 4 | 897.2 | 0 | 897.2 |
| 3 | Soil working and manuring | Sep/Oct | 4 | 897.2 | 0 | 897.2 |
| 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 | 224.3 | 0 | 224.3 |
| 6 | Soil conservation
measures(Renovation of
staggered trenches etc.) | Sep/Oct | 8 | 1794.4 | 0 | 1794.4 |



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



| | | | | | | |
|----------------------------|--|----------|----|--------|------|--------|
| 7 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| 8 | Contingency and unforeseen expenditure | | 0 | 0 | 300 | 300 |
| | Sub Total | | 26 | 5831.8 | 2294 | 8125.8 |
| 3rd Year | | | | | | |
| 1 | Complete weeding and cultural operations | Aug /Sep | 2 | 448.6 | 0 | 448.6 |
| 2 | Soil working | Aug /Sep | 2 | 448.6 | 0 | 448.6 |
| 3 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 4 | Watch & Ward (Whole Year) | Apr-Mar | 7 | 1570.1 | 0 | 1570.1 |
| | Sub Total | | 12 | 2691.6 | 0 | 2691.6 |
| 4th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 5th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 6th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 7th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 8th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |
| | Sub Total | | 3 | 672.9 | 0 | 672.9 |
| 9th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.6 | 0 | 448.6 |



**SCHEME FOR GAP PLANTING, SOIL & MOISTURE CONSERVATION
ON 100MTS FOREST LAND ON OUTER PERIMETER OF MINING
LEASE.**



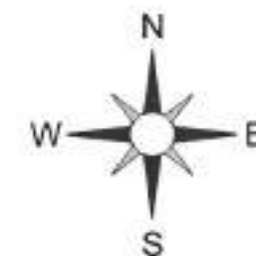
| | | | | | | |
|-----------------------|---------------------------------------|----------|-----|---------|------|---------|
| Sub Total | | | 3 | 672.9 | 0 | 672.9 |
| 10 th Year | | | | | | |
| 1 | Fire line tracing and inspection path | Feb/ Mar | 1 | 224.3 | 0 | 224.3 |
| 2 | Watch, Ward & Pruning | Apr-Mar | 2 | 448.5 | 0 | 448.6 |
| Sub Total | | | 3 | 672.9 | 0 | 672.9 |
| Grand Total | | | 163 | 36560.9 | 6460 | 43020.9 |

| ABSTRACT. | | | | |
|-----------|-------------|------------------|--------------------|--------------------|
| Year | Person days | Labour Component | Material Component | Total |
| 0th Yr | 20 | 1486 | 1035 | 5521 |
| 1st yr | 84 | 18841 | 3131 | 21972 |
| 2nd Yr | 26 | 5631.8 | 2294 | 8125.8 |
| 3rd Yr | 12 | 2691.6 | 0 | 2691.6 |
| 4th Yr | 3 | 672.9 | 0 | 672.9 |
| 5th Yr | 3 | 672.9 | 0 | 672.9 |
| 6th Yr | 3 | 672.9 | 0 | 672.9 |
| 7th Yr | 3 | 672.9 | 0 | 672.9 |
| 8th Yr | 3 | 672.9 | 0 | 672.9 |
| 9th Yr | 3 | 672.9 | 0 | 672.9 |
| 10th Yr | 3 | 672.9 | 0 | 672.9 |
| Total | 163 | 36560.9 | 6460 | 43020.9 or 43021/- |

MAP SHOWING FOREST AREA PROPOSED FOR RESTOCKING WITHIN 100MTS FROM M L BOUNDARY OF BAINIBASA GRAPHITE MINE OF M/s. PRADHAN INDUSTRIES IN VILLAGE BAINIBASA UNDER MUNIGUDA TAHASIL OF RAYAGADA DISTRICT, ODISHA

SCALE 1:5000

SETTLEMENT OFFICER & SURVEY OFFICER



LEGENDS



M L AREA BOUNDARY



100 mts FROM M L BOUNDARY



FOREST PATCH

BAINIBASA
ମୌଜା - ଗାନ୍ଧିବରା
ଥାନା - ବିଷମଜଳେ
ଥାନା ନମ୍ବର 137

BHAIRIGAR
ମୌଜା - ଭୈରବଗଡ଼
ଥାନା - ବିଷମଜଳେ
ଥାନା ନମ୍ବର 136

S. Sadhan
PRADHAN INDUSTRIES

Condition no. (xxxiv) of in-principle Approval order vide F.No.8-58/2017-FC
Dated 22nd January, 2018 by MoEF & CC, Govt. of India, New Delhi.

**SCHEME FOR DE-SILTATION OF VILLAGE TANKS COMING WITHIN 5KM RADIUS
OF BAINIBASA GRAPHITE MINES OF M/S PRADHAN INDUSTRIES, AT: BAINIBASA
DISTRICT: RAYAGADA.**

Revised Financial Outlay @ Rs 286.30 per Day.

9. Estimation of Work & Financial provisions.

Basing on the parameters stated above the cost is estimated as below.

| S/No | Name of the Village | Size L x B in meter | Area in Sq.M | Area over which silt to be removed (60% of col.4) | Depth of Silt to be removed in m | Quantum of Earth work m ³ | Rate per Cum | Amount required for de-siltation | Funds for Other General facilities. | Total requirement in Lakh Rs |
|--------------------------------------|---------------------|---------------------|--------------|---|----------------------------------|--------------------------------------|---------------|----------------------------------|-------------------------------------|------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1st Cycle | | | | | | | | | | |
| 1 | Bainibasa | 75x50 | 3750 | 2250 | 1.0 | 2250 | 194.89 | 438502.5 | 25000 | 4.635 |
| 2 | Bhairabagada | 100 x (40+20)/2 | 3000 | 1800 | 1.0 | 1800 | 194.89 | 350802 | 25000 | 3.758 |
| 3 | Buxi Siripur | 100x50 | 5000 | 3000 | 1.0 | 3000 | 194.89 | 584670 | 25000 | 6.097 |
| 4 | Lodhipanga | 40x30 | 1200 | 720 | 1.0 | 720 | 194.89 | 140320.8 | 25000 | 1.653 |
| 5 | Lodhipanga | 30 x20 | 600 | 360 | 1.0 | 360 | 194.89 | 70160.4 | 25000 | 0.952 |
| 6 | Nuagaon | 40x30 | 1200 | 720 | 1.0 | 720 | 194.89 | 140320.8 | 25000 | 1.653 |
| 7 | Karadhabandha | 40x30 | 1200 | 720 | 1.0 | 720 | 194.89 | 140320.8 | 25000 | 1.653 |
| 8 | Singari | 40x30 | 1200 | 720 | 1.0 | 720 | 194.89 | 140320.8 | 25000 | 1.653 |
| 9 | Bhairabagada | 40x30 | 1200 | 720 | 1.0 | 720 | 194.89 | 140320.8 | 25000 | 1.653 |
| 10 | Bhurisikhamar | 30 x20 | 600 | 360 | 1.0 | 360 | 194.89 | 70160.4 | 25000 | 0.952 |
| Total (1st Cycle) | | | | 11370 | 1.00 | 11370 | 194.89 | 2215899 | 250000 | 24.659 |
| 2nd Cycle | | | | | | | | | | |
| 1 | Bainibasa | 75x50 | 3750 | 2250 | 0.3 | 675 | 194.84 | 131550.8 | 0 | 1.316 |
| 2 | Bhairabagada | 100 x (40+20)/2 | 3000 | 1800 | 0.3 | 540 | 194.84 | 105240.6 | 0 | 1.052 |
| 3 | Buxi Siripur | 100x50 | 5000 | 3000 | 0.3 | 900 | 194.84 | 175401 | 0 | 1.754 |
| 4 | Lodhipanga | 40x30 | 1200 | 720 | 0.3 | 216 | 194.84 | 42096.24 | 0 | 0.421 |
| 5 | Lodhipanga | 30 x20 | 600 | 360 | 0.3 | 108 | 194.84 | 21048.12 | 0 | 0.210 |
| 6 | Nuagaon | 40x30 | 1200 | 720 | 0.3 | 216 | 194.84 | 42096.24 | 0 | 0.421 |
| 7 | Karadhabandha | 40x30 | 1200 | 720 | 0.3 | 216 | 194.84 | 42096.24 | 0 | 0.421 |
| 8 | Singari | 40x30 | 1200 | 720 | 0.3 | 216 | 194.84 | 42096.24 | 0 | 0.421 |
| 9 | Bhairabagada | 40x30 | 1200 | 720 | 0.3 | 216 | 194.84 | 42096.24 | 0 | 0.421 |
| 10 | Bhurisikhamar | 30 x20 | 600 | 360 | 0.3 | 108 | 194.84 | 21048.12 | 0 | 0.210 |
| Total of 2nd Cycle | | | | 11370 | | 3411 | 194.84 | 664769.8 | 0 | 6.648 |
| Sub Total | | | | | | | | | | 31.307 |
| Add 20% for cost Escalation | | | | | | | | | | 6.261 |
| G. Total | | | | | | | | | | 37.568 |

(Rupees Thirty Seven Lakh Fifty Six Thousand & Eight Hundred Only.)

Submitted

USER AGENCY



Page | 1

Approved for Rs. 37,56,800/-
(Rupees Thirty seven lakh fifty six thousand eight hundred only.)
Regional Chief Conservator of Forests

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

**SCHEME FOR DE-SILTATION OF VILLAGE TANKS COMING
WITHIN 5KM RADIUS OF BAINIBASA GRAPHITE MINES OF
M/S PRADHAN INDUSTRIES, AT: BAINIBASA DISTRICT:
RAYAGADA.**

AS IT PERTAINS TO DIVERSION OF 44.038HA FOREST LAND.



Compliance to:

***Condition no.(xxxiv) of in-principle Approval order vide F.No.8-58/2017-
FC Dated 22nd January,2018 by MoEF & CC, Govt. of India, New Delhi.***



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

In course of approval of diversion of forest land to an extent of 44.038 hectare coming within ML area of Bainibasa Graphite Mines, the MoEF & CC, Govt. of India, New Delhi in their "In principle approval" order **F.No.8-58/2017-FC Dated 22nd January,2018** have stipulated certain conditions for reducing impact of siltation, increase ground water recharge etc. In Stipulated Condition No (xxxiv) de-silting of village tanks / water bodies have been suggested. The condition reads as follows:

" Condition No (xxxiv): The user agency shall under 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 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;

2. OBJECTIVES:

This scheme aims at the following aspects with respect to the project i.e Bainibasa mines. This is required to pave way for removal of siltation in various water bodies / ponds around the project to ensure availability of water in village tanks & other water bodies within 5km from the lease hold area. The main objectives are:

- De-silting of village tanks and other water bodies located within 5km from the mining lease area of Bainibasa Graphite Mines.
- By way of de-siltation, impact of siltation on ground water recharge can be checked and prevented.
- To ensure availability of water in the said village tanks/water bodies to facilitate the villages for their requirement of water including that of live stock, Wild Animals & Birds.
- To ensure a congenial livelihood to the local people.

3. FACTORS RESPONSIBLE FOR SILTATION:

- a) Normally the ponds, water bodies do suffer from siltation due to sedimentation of soil / clay carried in to the water bodies due to inflow of water during rains.
- b) Soil erosion may also be attributed as a primary factor responsible for siltation in ponds.
- c) Rainfall with high intensity at higher altitude is the most common reasons for soil erosion & hence causes siltation in nearby ponds / water bodies.



- d) Soil erosion also occurs from waste dumps, excavated areas & naturally denuded ground surface.
- e) The present case the project is a New project and not yet taken up. Land within ML area is virgin and mostly covered with bushes / grasses and light vegetation. There are some private lands within the ML area and under agriculture and waste land. Soil erosion in mainly places is from erosion of pond embankment, cultivated lands added with air borne dust etc.
- f) Podu Cultivation is also contributes for soil erosion. Cultivation on high gradient land is one of the major factors for soil erosion.
- g) Further siltation of ponds also takes place due to air borne sand and dust with other vegetative materials falling into the ponds. This adds to the process of siltation, Hence by this phenomenon with passage of time, new layers of silt accumulate over the older layer of silt & become thicker ultimately the depth of the water source decreases & capacity of water storage reduces. De-silting becomes inevitable to ensure availability of more water in the pond/ water bodies for day to day requirement of the villages.

4. Soil & Topography:

a) Soil

The Soil within the study area is loam to sandy loam and acidic in nature. The mineral content of soil

- a. Silica as SiO_2 -7.5%
- b. Chloride - 0.60%
- c. Sulphate - 0.24%
- d. Potassium as K - 0.2%
- e. Magnesium as Mg - 0.41%
- f. Calcium as Ca -0.41%
- g. Manganese as Mn - 1.28%
- h. Iron as Fe - 1.40%
- i. Available Organic Carbon 1.5%
- j. Available Nitrogen 0.8%

From the above it may be seen that the soil is rich in Organic carbon which is good for all types of vegetation.

b) Topography.

Topography of the project site is moderately undulating and study area has steep topography with number of hills, forests, and is crisscrossed with perennial and many seasonal streams and channels. The average elevation of the Study area is 450m MSL. The list of hills / danger with elevation coming within the Study Zone is furnished below.



Table 1 Name of danger/hills

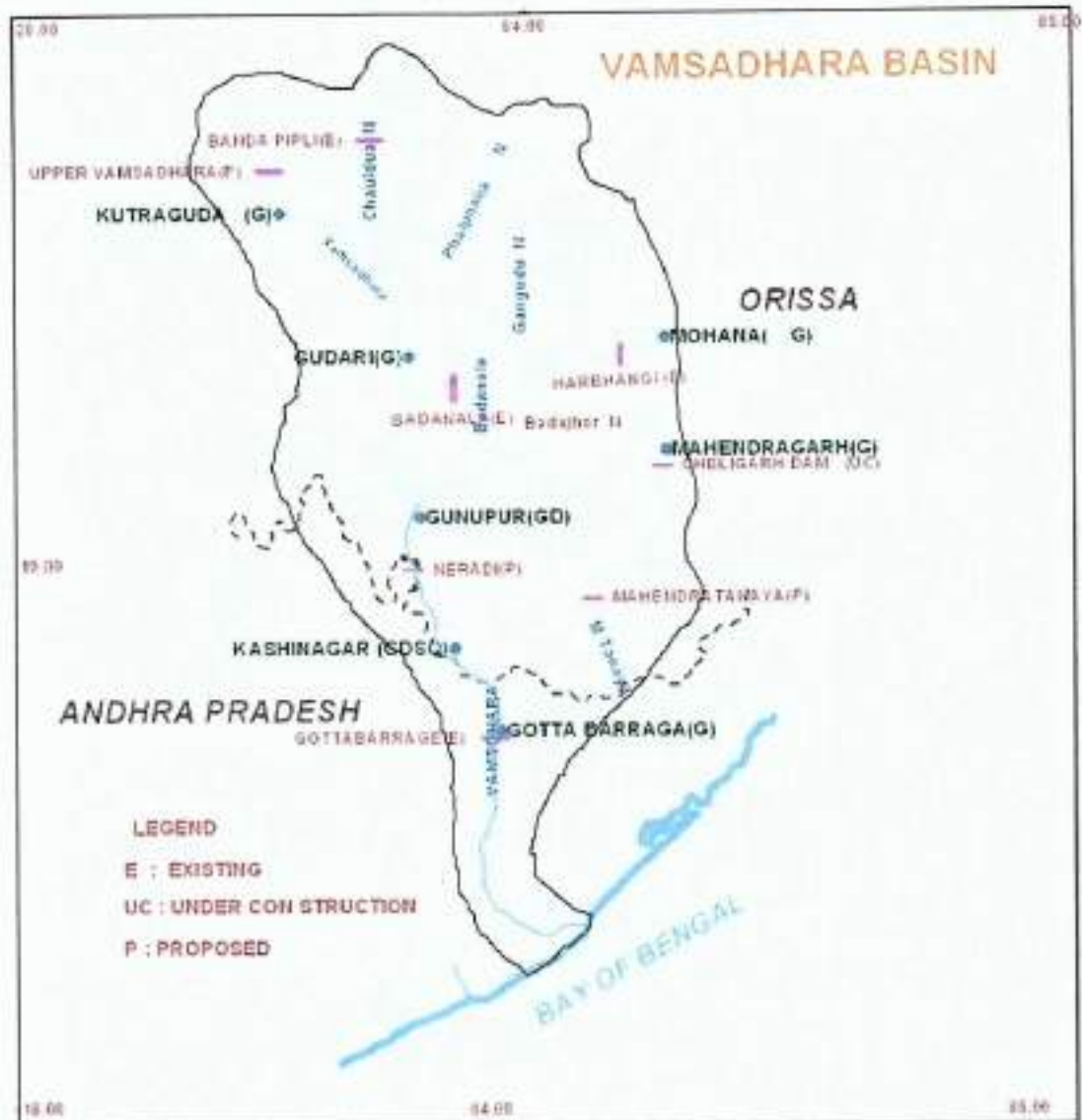
| Sl No | Name of danger / Hills | Height in mts MSL | Direction from the ML area. |
|-------|------------------------|-------------------|-----------------------------|
| 1 | Jagi Dangar | 600 | S |
| 2 | Bamuni Dangar | 834 | N |
| 3 | Talidaki Paharh | 594 | SE |
| 4 | Pather Dangar | 807 | S |
| 5 | Patra Dangar | 766 | NW |
| 6 | Sarambi RF | 919 | SW |
| 7 | Khambesi RF | 944 | NW |
| 8 | Dhahikala RF | 678 | N |
| 9 | Kudilima RF | 846 | N |
| 10 | Deokupuli RF | 712 | E |

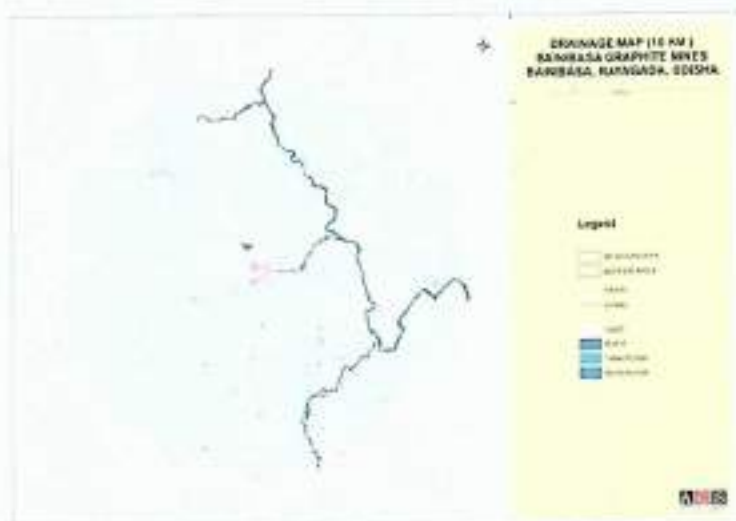
5. Drainage pattern of the area:

The Zone of Impact of the project drains to North East direction. The Saket nalla is the immediate drainage nala (Perennial) adjacent to South- Eastern Boarder of the ML area. After flowing around 3.9km it joins with River Vamsadhara. It is an important east flowing river between Rushikulya and Godavari, in Odisha and Andhra Pradesh states. The river originates in the border of Thuamul Rampur in Kalahandi district and Kalyansinghpur in Rayagada district of Odisha and runs for a distance of about 254 kilometers, where it joins the Bay of Bengal at Kalingapatnam, Andhra Pradesh. The total catchment area of the river basin is about 10,830 square kilometers. Vamsadhara river basin occupies 8015 square kilometers in Odisha and the remaining 2815 km² flows in Andhra Pradesh. The river basin receives high annual average rainfall of magnitude 1400 mm. The portion lying in Rayagada district of Odisha is predominantly hilly and tribal populated area. The discharge to Bay of Bengal has been estimated to be 25m³ / sec.



SCHEME FOR DE-SILTING OF VILLAGE TANK LOCATED WITHIN 5KM FROM
ML AREA.





6. Principle of de-siltation:

In order to achieve the objectives mentioned in the beginning of the scheme, the best way is to resort to practice of de-siltation to ponds/ water bodies at regular intervals. The silts to be removed are to be used in enforcement of embankment and planting of trees on it.

7. List of ponds/ water bodies available within 5km of the project & Selected.

To locate the ponds / water bodies within 5km radius of the project, field verification was taken up in the areas and the following ten tanks are found to be suitable for de-siltation. The Range Officer, Muniguda has reported about 7 village tanks vide his memo no 493 dated 17.04.2018 (Copy at Annexure-I)

| Sl No | Name of the Village | Size of the Pond | Silt depth | GPS Coordinate |
|-------|---------------------|------------------|------------|-----------------------------|
| 1 | Bainibasa | 75mx50m | 1.50m | 19°38'21.4" N 83°29'32.1" E |
| 2 | Bhairabagada | 100m x(40+20)/2m | 1m | 19°38'13.2"N 83°30'41.9"E |
| 3 | Buxi Siripur | 100mx50 m | 1m | 19°35'46.4"N 83°30' 30.8"E |
| 4 | Lodhipanga | 40mx30m | 1m | 19°39'45"N 83°30' 13"E |
| 5 | Lodhipanga | 30m x20m | 1m | 19°39'51"N 83°30' 04"E |
| 6 | Nuagaon | 40mx30m | 1m | 19°38'57"N 83°29' 52"E |
| 7 | Karadhabandha | 40mx30m | 1m | 19°40'14"N 83°28' 24"E |
| 8 | Singari | 40mx30m | 1m | 19°40'27"N 83°30' 58"E |
| 9 | Bhairabagada | 40mx30m | 1m | 19°40'39"N 83°28'44"E |
| 10 | Bhurisikhamar | 30m x20m | 1m | 19°38'15"N 83°30'40"E |

Table 2 Location of ponds / water bodies

It is worth mentioning here that the above ponds need de-silting to a varying depth up to 1m. The location map of ponds on topo sheet is at annexure-II

8. Method of de-siltation:

- De-siltation to be taken up at regular intervals in dry months of the summer season to get best result & depth required to be maintained.
- The dried silts to be removed manually or mechanically basing on the site condition/ quantity of silt accumulated.



SCHEME FOR DE-SILTING OF VILLAGE TANK LOCATED WITHIN 5KM FROM ML AREA.



- Silt accumulation is mainly found in basal of the pond which is about 40% less than the size of the pond mentioned.
- Silting to a depth of 1m is to be carried out manually. In the 2nd round de-silting to a depth of 0.30 m will be taken up.
- De-siltation may be taken up at 5 years cycle.
- The silts so excavated will be placed around the pond in an embankment design at about width of 2.5m and height of 1m and simultaneously compacting the soil.
- Grass tufting on both the side of the bund will be done. Water inlet PVC pipe of 6" diameter two numbers are to be provided.
- Similarly to drain out the excess water let PVC pipe of 6" diameter two numbers are also to be fixed.
- A bathing Ghats of 3m wide with steps (Step height of 25cm) to be provided.
- On the embankment 10 plants will be planted with gabion facilities. Ficus sp, Aegle marmelos, Amla & Jamun are favored species.
- For Bathing Ghat, fixing of pipe and planting of trees a sum of Rs25000/- on an average to be provided on LS.

9. Estimation of Work & Financial provisions.

Basing on the parameters stated above the cost is estimated as below.

| Sl No | Name of the Village | Size L x B in meter | Area in Sq.M | Area over which silt to be removed (60% of col4) | Depth of Silt to be removed in m | Quantum of Earth work m ³ | Rate per Cum | Amount required for de-siltation | Funds for Other General facilities. | Total requirement in Lakh Rs |
|------------------------------------|---------------------|---------------------|--------------|--|----------------------------------|--------------------------------------|--------------|----------------------------------|-------------------------------------|------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1st Cycle | | | | | | | | | | |
| 1 | Bainibasa | 75x50 | 3750 | 2250 | 1 | 2250 | 152.70 | 343575 | 25000 | 3.69 |
| 2 | Bhairabagada | 100 x(40+20)/2 | 3000 | 1800 | 1 | 1800 | 152.70 | 274860 | 25000 | 3.00 |
| 3 | Buni Sripur | 100x50 | 5000 | 3000 | 1 | 3000 | 152.70 | 458100 | 25000 | 4.83 |
| 4 | Lodhipanga | 40x30 | 1200 | 720 | 1 | 720 | 152.70 | 109944 | 25000 | 1.35 |
| 5 | Lodhipanga | 30 x20 | 600 | 360 | 1 | 360 | 152.70 | 54972 | 25000 | 0.80 |
| 6 | Nuagoon | 40x30 | 1200 | 720 | 1 | 720 | 152.70 | 109944 | 25000 | 1.35 |
| 7 | Karadhabandha | 40x30 | 1200 | 720 | 1 | 720 | 152.70 | 109944 | 25000 | 1.35 |
| 8 | Singari | 40x30 | 1200 | 720 | 1 | 720 | 152.70 | 109944 | 25000 | 1.35 |
| 9 | Bhairabagada | 40x30 | 1200 | 720 | 1 | 720 | 152.70 | 109944 | 25000 | 1.35 |
| 10 | Bhursikhamar | 30 x20 | 600 | 360 | 1 | 360 | 152.70 | 54972 | 25000 | 0.80 |
| Total (1st Cycle) | | | | 11370 | 1.00 | 11370 | 152.70 | 1736195 | 250000 | 18.86 |
| 2nd Cycle | | | | | | | | | | |
| 1 | Bainibasa | 75x50 | 3750 | 2250 | 0.3 | 675 | 152.7 | 103072.5 | 0 | 1.03 |
| 2 | Bhairabagada | 100 x(40+20)/2 | 3000 | 1800 | 0.3 | 540 | 152.7 | 82458 | 0 | 0.82 |
| 3 | Buni Sripur | 100x50 | 5000 | 3000 | 0.3 | 900 | 152.7 | 137430 | 0 | 1.37 |
| 4 | Lodhipanga | 40x30 | 1200 | 720 | 0.3 | 216 | 152.7 | 32983.2 | 0 | 0.33 |
| 5 | Lodhipanga | 30 x20 | 600 | 360 | 0.3 | 108 | 152.7 | 16491.6 | 0 | 0.16 |
| 6 | Nuagoon | 40x30 | 1200 | 720 | 0.3 | 216 | 152.7 | 32983.2 | 0 | 0.33 |
| 7 | Karadhabandha | 40x30 | 1200 | 720 | 0.3 | 216 | 152.7 | 32983.2 | 0 | 0.33 |
| 8 | Singari | 40x30 | 1200 | 720 | 0.3 | 216 | 152.7 | 32983.2 | 0 | 0.33 |
| 9 | Bhairabagada | 40x30 | 1200 | 720 | 0.3 | 216 | 152.7 | 32983.2 | 0 | 0.33 |
| 10 | Bhursikhamar | 30 x20 | 600 | 360 | 0.3 | 108 | 152.7 | 16491.6 | 0 | 0.16 |
| Total of 2nd Cycle | | | | 11370 | | 3411 | 152.7 | 520859.7 | 0 | 5.21 |
| Sub Total | | | | | | | | | | 25.07 |
| Add 20% for cost Escalation | | | | | | | | | | 5.01 |
| G. Total | | | | | | | | | | 30.08 |

Table 3 Estimation of work & Financial provisions

(Rupees Thirty Lakh Eight Thousand only)

The scheme is verified and found correct technically.

Technically approved for Rs 30,08,000/-
(Rupees Thirty lakh eight thousand only)

DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION

Asst. Conservator of Forests
O/o R.C.C.F. Koraput Circle
KORAPUT

Regional Chief Conservator of Forests
KORAPUT CIRCLE



10. Execution of the scheme:

The plan period of the scheme is 10 years i.e. from 2019-20 to 2028-29. De-siltation is to be carried out in a Five year cycle. All the ponds will be de-silted twice in the plan period of 10 years. The year wise execution programme is given the following table. In case of dispute, if any pond could not be taken up during the assigned year, the same will be taken up in the next year in addition to the assigned one.

| Sl No | Name of the village | Year of Execution | | | | | | | | | |
|-------|---------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 | 2025-26 | 2026-27 | 2027-28 | 2028-29 |
| 1 | Bainibasa | | | | | | | | | | |
| 2 | Bhairabagada | | | | | | | | | | |
| 3 | Buxi Siripur | | | | | | | | | | |
| 4 | Lodhipanga | | | | | | | | | | |
| 5 | Lodhipanga | | | | | | | | | | |
| 6 | Nuageon | | | | | | | | | | |
| 7 | Karadhabandha | | | | | | | | | | |
| 8 | Singari | | | | | | | | | | |
| 9 | Bhairabagada | | | | | | | | | | |
| 10 | Bhurisikhamar | | | | | | | | | | |

11. Planting saplings:

- It is suggested to select saplings of 2 year old promising seedlings (mainly fruit bearing of local species such as mango, Jack fruit, Jamun, Bara (Ficus Sp), Aswastha (Ficus Sp.) etc.
- Pits of 45cm x 45cm x 45cm to be dug out for tree planting.
- Bamboo gabions/ other type of tree guard to be provided to prevent damage by cattle.
- The required fertilizers/ insecticides to be provided.

12. Execution of Work:

The Scheme will be executed by the User Agency as per this approved scheme.

13. Inspection, Monitoring & Evaluation:

For successful implementation of this scheme, the User Agency is to execute & review the work periodically. Its effectiveness is to be reported to Forest Department annually.

14. CONCLUSION:

With the above provisions, it is expected that local villagers will be benefited in shape of wage earning, bathing facilities. The water percolation to recharge ground water will also be enhancing in due course. The local animals / birds will also be getting water in hard summer.

Encl: Annexure-I & II.



**SCHEME FOR DE-SILTING OF VILLAGE TANK LOCATED WITHIN 5KM FROM
ML AREA.**



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

(B. Mahara OFS SB-I Rtd)

Dy. Conservator of Forests.
Consultant,

(Sri NK Rout, IFS. Rtd)

Dy. Conservator of Forests.
Consultant,

**DIVISIONAL FOREST OFFICER
RAYAGADA DIVISION**

Signature of Project Proponent.



OFFICE OF THE FOREST RANGE OFFICER, MUNIGUDA RANGE

ବନାଞ୍ଚିତ ଅଧିକାରୀଙ୍କ କାର୍ଯ୍ୟାଳୟ, ମୁନିଗୁଡ଼ା ଦେବାଞ୍ଚଳ

[ସୂଚନାସଂଖ୍ୟା: ୦୭୮-୨୩-୨୪୫୭୭୧, ଇ-ମେଲ:- muniguda@gmail.com]

Memo No. 493 // Dated. 17/04/2018

To

The Divisional Forest Officer,
Rayagada Forest Division.

Sub: List of Water bodies within 5km radius of Pradhan Industries Ltd
Bainibasa.

Sir,

As Required by you I am to Submitting herewith the list of waterbodies located
within 5km radius of Pradhan Industries Ltd Bainibasa.

| Sl no | Name of the Village | Dimension of waterbodies | Depth of desiltation. | GPS Reading |
|-------|---------------------|--------------------------|-----------------------|---------------------|
| 1 | Lodipanga | 40mx30m | 40mx30m x 1mt | 19.39.45" 83.30.13" |
| 2 | Lodipanga | 30mx20m | 30mx20m x 1mt | 19.39.51" 83.30.4" |
| 3 | Naggon | 40mx30m | 40mx30m x 1mt | 19.38.57" 83.29.52" |
| 4 | Karadabandha | 40mx30m | 40mx30m x 1mt | 19.40.14" 83.28.24" |
| 5 | Singari | 40mx30m | 40mx30m x 1mt | 19.40.27" 83.30.58" |
| 6 | Bhairabguda | 50mx30m | 40mx30m x 1mt | 19.40.39" 83.28.45" |
| 7 | Bhimsikhanur | 30mx20m | 30mx20m x 1mt | 19.38.15" 83.30.40" |

This is for your kind information and necessary action.

Yours Faithfully,



Forest Range Officer,
Muniguda Range

(24)

Analysis of rate for Earth Work. (For 100 cum)

| Sl. No | Description. | Unit required | Rate | Amount |
|--------|--|-------------------------------|--------|-------------------------------|
| i. | Earth work in hard soil or gravelly soil within 50m. Initial lead and 1.5m initial lift including rough dressing and breaking clods to maximum 5cm to 7cm and laying in layers not exceeding 0.3m in depth and as per the direction of the Engineer-in-charge. | Labour
Man Mulia 21.5 nos. | 224.30 | 4822.45 |
| | | Woman Mulia 21.5 nos | 224.30 | 4822.45 |
| | Sub total (Labour) | | | 9644.90 |
| ii. | Overhead Charges @ 10 % on (i). | | | 964.49 |
| iii. | 2% Sundries and I & P etc. on (i) | | | 192.90 |
| (iv) | Total for Earth Work | | | 10802.29 or say 108.03 |
| (v) | Add 20% excess for foundation/trenches etc | | | 21.61 |
| 2 | Compacting of soil on embankments. | | | |
| i | Ramming or rolling earth work with light H.R.R. in embankment in layers not exceeding 0.3m Data for 28.31 | Labour Man
Mulia 0.75 nos | 224.30 | 168.225 |
| | | woman mulia 0.5 nos | 224.30 | 112.15 |
| | Sub Total (labour) | | | 280.375 |
| ii | Overhead Charges @ 10 % on (i) | | | 28.04 |
| iii | 2% Sundries and T & P etc. on (i) | | | 5.61 |
| iv | Total | | | 314.025 |
| v | For 100 cum = Rs. 314.025 X 100/28.31 = Rs. 1109.24 | | | 1109.24 or say 11.10 per cum. |
| | Total: (108.03+21.61+11.10) | | | 140.74 |
| | Contractor profit @7.5% | | | 10.56 |
| | Add Labour cess @ 1% | | | 1.40 |
| | G.Total per Cum of Earth work | | | Rs.152.70 |

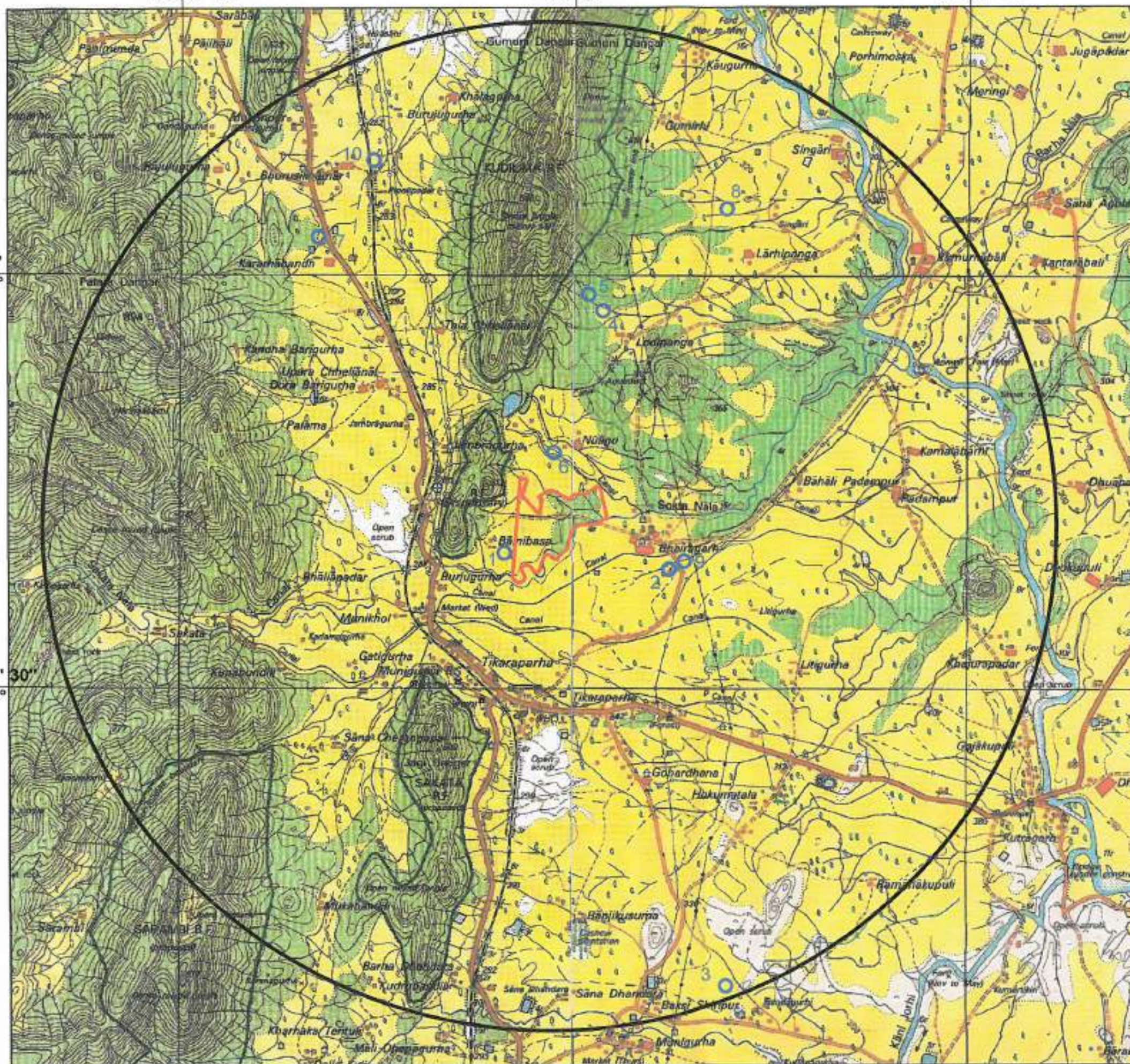
{Rupees One hundred Fifty Two & Seventy Paise only}



83° 27' 30"

83° 30'

83° 32' 30"

40°
19'40°
19'37° 30"
19'37° 30"
19'

M L AREA BOUNDARY



5 KM RADIUS BUFFER ZONE



LOCATION OF POND/WATER BODIES

TOPO SHEET NO :- E 44 F6 (65 M/6)
E 44 F10 (65 M/10)

MAP SHOWING THE LOCATION OF
58.704 HA. M L AREA (GRAPHITE) OF PRADHAN INDUSTRIES
IN VILLAGE - BAINIBASA, P.S - MUNIGUDA
TAHASIL - MUNIGUDA, DIST. - RAYAGARH, ODISHA

LOCATION MAP

R.F. 1:45,000

LIST OF PONDS & WATER BODIES IN 5 KM RADIUS

- 1) Bainibasa
- 2) Bhairabgada
- 3) Buxi Siripur
- 4) Lodipanga
- 5) Lodipanga
- 6) Nuagaon
- 7) Karadhabandha
- 8) Singari
- 9) Bhairabgada
- 10) Bhurisikhamar



83° 27' 30"

83° 30'

83° 32' 30"