



सीएमपीडीआई
cmpdi
A Mini Ratna Company

Final Mine Closure Plan
of
LEDO Colliery, NEC, CIL, Margherita, Assam
*(As per the Mine Plan and Mine Closure Plan Guidelines of MoC
F. No-34011/28/2019-CPAM Dt. 29.05.2020)*

North Eastern Coalfields
(An Unit Under Administrative Control of Coal India Limited)



May 2024

Central Mine Planning and Design Institute Limited
Gondwana Place, Kanke Road, Ranchi

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List of Abbreviation			
AAQ	Ambient Air Quality	o	Degree
ACA	Accredited Compensatory Afforestation	'	Minute
APSCB	Assam Pollution Control Board.	"	Second
AQ	Air Quality	°C	Degree centigrade
ASDMA	Assam State Disaster Management Authority		
BPL	Below Poverty Level	E	East
CA	Compensatory Afforestation	N	North
CCO	Coal controller office / officer	S	South
CHP	Coal handling plant	W	West
Ch-	Chapter-		
CIL	Coal India Limited		
CIPET	Central Institute of Plastics Engineering & Technology		
CMPDI	Central Mine Planning and Design Institute		
Contd...	Continued	km	kilometer
Dtd.	Dated	m	meter
Discontd.	Discontinued	mm	milimeter
EQ	Environment Quality	'/ft.	Feet
F No.	File Number	ha	hectare
Fig.	Figure	tes	Tons
FMCP.	Final Mine Closure Plan	L	Lakh(s)
GOI	Government of India	LS	Lumpsum
Ha/ha	Hectare		
IIT-ISM	Institute of Technology-ISM Dhanbad		
Lat.	Latitude		
Long.	Longitude		
MoC	Ministry of Coal		
MoEFCC	Ministry of Environment Forest and Climate Change		
No.	Number		
NEC	Nort Easter Coalfields		
NEERI	National Environment Engineering Research Institute		
NH	National Highway		
OB	Over burden		
OC	Opencast	UG	Under Ground
OCP	Opencast Project		
PO	Project office/officer		
pp.	Page number		
W/S	Workshop	WQ	Water Quality

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LIST OF DOCUMENTS REFERRED	
SI No.	Description
1	A brief note on Mining methods in Mines of North Eastern Coalfields. [S 83]
2	A brief note on introduction of New mining methods in mines of North Eastern Coalfields.[S 309]
3	Coal Mines Regulation -2017
4	Cost Index at NEC 2024
5	Coal Mines (Nationalisation) Act, 1973, no. 26 of 1973 dtd. 30 th May 1973, Part-II, The Gazette of India Extraordinary, pp. 302
6	Extraction of steep and thick Deams in Makum Coalfield by Tipong Method of Mining [G/123]
7	F No. 34011/28/2019-CPAM, GoI, MoC, Dtd. 19/05/21
8	F No. 34011/28/2019-CPAM, GoI, MoC, Dtd. 16/12/19
9	F No. 34011/28/2019-CPAM, GoI, MoC, Dtd. 29/05/20
10	F No. MPS/2/2022-MPS, GoI, MoC dtd. 28/10/22
11	FC-11/159/2022-FC dtd. 24.01.23 “Guidelines for ACA”
12	Mine Closure Status Report Jeypore Dilli
13	The Coal Mines Nationalisation Laws (Amendment) Act, 1986, No. 57 of 1986, Dtd. 15 Dec, 1986
14	Working of Thick & Incline Seams With Flexible Roofing Method [g/132]
15	Work Order for artificial regeneration plantation on OBD of Tirap OCP under progressive mine closure activity dtd. 05.02.2024.
16	Email dtd. 04.05.2024
17	https://neccoal.co.in/
18	www.scribid.com

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RESOURCE PERSON OF NEC		
Resource person	Name	Mobile no.
General Manager, NEC	Mr Ketholelhou Mere	7099006058
Area Mgr (E&F, NEC/ GM(E&M)	Mr Manash Pratim Dutta	9531105636
Area Manager (Survey), NEC	Mr Basant Kumar	9531105675
Dy. Manager (Envnt.), NEC	Mr Naruttam Das	9531105680
Area Manager (L&R), Dy. Mgr (CD)	Mr Santonu Hazarika	9531105658
Asst. Manager (Envnt.), NEC	Mr Shankar Prasad Yadav	9531105749

LIST OF TEAM MEMBERS		
Team Member		Mobile no.
Mr V K Pandey	General Manager (Env)	9431931904
Mr Pramod Kumar	General Manager (M)	8987788773
Mr Sushant Dixit	General Manager (M)	8987788909
Dr Manoj Kumar	Sr Mgr (M)	8987788808
Mr Abhisht Raj	Dy Mgr (Env)	9971238850
Mr K Pawan Kumar	Dy Mgr (M)	8709081208
Mr Jitesh Kumar	Astt. Mgr (C)	8171314380

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Major points of FMCP Guidelines and their compliance for Management of Mines discontinued/abandoned before 2009

Sl. No.	FMCP Guidelines		Compliance in respect of Guideline	Ref. para of MoC guideline dtd. 28.10.22	Chapter
1	Categorisation of Non Operational mines into Discontinued/ Abandoned/ closed mines		Baragolai Colliery is a closed mine.	1.3	1
2	Steps to be taken by mine owners to manage the non-operational mines.				
	a	Preparation of FMCP	FMCP prepared by CMPDI	2.2.1	8
	b	Approval of FMCP	Final mine plan to be approved by competent authority.	2.2.2	8
	c	Implementation of FMCP	NEC to implement the FMCP	2.2.3	8
	d	Alternate use of reclaimed land	Alternate use of reclaimed land proposed in FMCP.	2.2.4	8
3	Social support measures				
	a	Air, Water and Soil monitoring of the region surrounding 5 kms of discontinued/ abandoned mines should be monitored as per MoEFCC/CPCB standards	Environment monitoring is proposed in FMCP as per para 8.3 of MoC guideline dtd. 29.05.20.	3.1	7&8
	b	Health camps must be organized on monthly basis to monitor the health of the population residing within 05 km of the discontinued/ abandoned mines	Health Camps are proposed in FMCP	3.2	8
	c	A careful consideration is to be given to provide reskilling to the willing workers as per their need for their gainful employment.	Reskilling of willing workers has been proposed in FMCP	3.3	8

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Sl. No.	FMCP Guidelines	Compliance in respect of Guideline	Ref. para of MoC guideline dtd. 28.10.22	Chapter
4	Financial Provisions			
	a Financial provisions for closure activities of FMCP.	Financial provisions made in FMCP	4	8
	b Closure cost to be estimated on required activities.	An amount of Rs. 250 lakhs has been estimated on required activities as per para 8.10.1 of the Guidelines of preparation of Mining Plan and Mine Closure Plan dated 29 May 2020.	4	8
5	Timeline for carrying-out mine closure activities as detailed in the FMCP	Activities proposed to be completed within 3 years as per para 2.11 of MoC guideline dtd. 28.10.22.	-	8
6	Maintenance of records & submission of returns	Provisions made in FMCP in compliance to para 6 of MoC guideline dtd. 28.10.22.	6	8
7	Monitoring	Provisions made in MCP to fulfill the requirement in compliance to para 7 of MoC guideline dtd. 28.10.22	7	8

CHECKLIST

Details		(✓ / ✗)
	Expert-review Report	
Text	Project Information	✓
Text	Exploration, Geology, Seam Sequence, Coal Quality and Reserve	✓
Text	Mining	✓
Text	Safety Management	✓
Text	Infrastructure Facilities proposed and their Location	✓
Text	Land Requirement	✓
Text	Environment Management	✓
Text	Progressive & Final Mine Closure Plan	✓
Annexure	Copy of allotment order /Vesting order.	✓
Annexure	Certificate of Qualified person/ Accredited Mining Plan	✓
Annexure	Approval of the Company Board	✗
Annexure	Copy of earlier approval of mining plan.	✗
Annexure	Plan / chart showing schedule of Implementation of Mine closure activities (progressive and final closure) with duration of important activities	✓
Annexure	Expert-Review Report carried out by an Accredited Mining Plan Preparing Agency (MPPA)	✓
Annexure	Other document (if any)	
	MoC guideline dtd. 28.10.22	✓
	Work order dtd. 17.10.23	✓
	Form-1 : AMP dtd. 19.11.08	✓
	Environment Quality Report	

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Details		(✓ / ✕)
Plates	Location plan	✓
Plates	Plan certified by Qualified person/ Accredited Mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary/existing mining lease and where the project area extends beyond the block boundary, a Plan certified by Qualified person/ Accredited Mining Plan preparing agency (MPPA) should be supported with a plan with cardinal co-ordinates duly certified by the Mines and Geology Department of the concerned State Government. Plan in support of Annexure - II	✓
Plates	Printed copy of the KML file superimposed in the recent (not older than one year from the base date) dated satellite Image duly certified by Accredited Agency should also be attached. Note: The soft copy of the KML file shall also be part of the Soft copy of the mining Plan.	✓
Plates	Cadastral plan showing approved block boundary vis-à-vis proposed/existing mining lease & Mine boundary superimposed over it in distinct color, showing land use and infrastructure etc..	✕
Plates	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area	✕
Plates	Representative Graphic Litholog	✕
Plates	Surface Plan showing drainage system, Contour, preferably at 3m interval, location of BH (borehole)	
Plates	Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc	✕
Plates	Tentative land use plan showing land type (Govt., forest and tenancy land) with its data source	✓
Plates	Floor contour plan and seam folio plan, iso-grade plan	✕
Plates	Cross-section showing coal/lignite seam(s)	✕
Plates	Plan showing existing and proposed surface layout(s)	✓
Plates	Plan showing total coal thickness and overburden thickness and stripping ratio (in case of opencast (OC) Mines)	NA
Plates	Final stage quarry plan showing haul road alignment (in case of OC Mines)	NA

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Details		(✓ / ✗)
Plates	Plan showing mode and location of entries and surface layouts (in case of underground (UG) Mines)	✓
Plates	Layout of the panel for each system (like Longwall, Continuous Miner, Bord& Pillar, road header etc.) should be given (in case of UG Mines)	✗
Plates	Layout of pillar extraction (in case of UG Mines)	✗
Plates	Support system (in case of UG Mines)	✗
Plates	Haulage and transport system (in case of UG Mines)	✗
Plates	Post mining land use plan	✓
Plates	Progressive mine closure plan/ stage plans	✗
Plates	Reclamation plan	✓

Chapter 1: Project Information

1.1 INTRODUCTION

LEDO Colliery is an inoperative underground mine of North Eastern Coalfields (NEC), which is under the administrative control of Coal India Limited (CIL). The project is in the north-central region of Makum Coalfields in Tinsukia district, Assam. This mine has ceased its production in the year 2008-09. [source : pp. 80-86 of MCSR for Jeypore Dilli colliery, Sep 2017]. Now, NEC desires to take up the Final Mine Closure Plan (FMCP) of LEDO colliery in compliance with the guidelines for management of mines discontinued closed before the year 2009 by MoC, GoI, [F.No. MPS/02/2022-MPS Date: 28th Oct'2022].[Annexure-VIII]

In this regard, NEC has requested for preparation of FMCP for Jeypore Dilli Colliery (UG mine), Baragolai Colliery (UG mine) and Ledo colliery of North Eastern Coalfields, Coal India Limited and issued work order to CMPDI for carrying out preparation of Final Mine Closure Plan of LEDO Colliery (UG mine) along with other mine vide letter no: NEC/GM/WO/2023/GM(BD/168 dtd. 17.10.23. [Annexure-IX]

Therefore, this report of Final Mine Closure Plan of LEDO Colliery (UG) has been prepared based on the field observations and data provided by NEC, in line with the Guidelines for preparation of Mine Closure Plan laid down by the MoC vide letter no: F. No-34011/28/2019-CPAM Dt. 29.05.2020.

- | | | |
|-------|---------------------------------------|--|
| 1.1.1 | Name of Coal / Lignite Block | The LEDO Colliery was operated under Lachitkhani Block |
| 1.1.2 | Name of the Coalfield / Lignite Field | <p>North Eastern Coalfield (NEC), is under the administrative control of Coal India Limited (CIL) (Plate 1.1). The Coalfields extend along the Northern front of the Naga – Patkai hill range. The coal deposits of Tertiary formation belong to the Eocene and Oligocene age. It operates coalmines in the state of Assam. The headquarter is located at Margherita, Tinsukia – 786181, Assam, India.</p> <p>The project under consideration, i.e. LEDO Colliery (UG) is administratively under NEC area and headed by General Manager, NEC. The address for correspondence is as given below :</p> |

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Address :

Mr Ketholelhou Mere, General Manager, NEC

Office of the General Manager, North-Eastern Coalfields, Coal India Limited, Margherita, PO – Margherita, PS- Margherita Dist. - Tinsukia, Assam Pin - 786181.

Mob no. : 7099006058 , Land line no.: 03751-220283
email :gm.nec.cil@coalindia.in

1.1.3 Base date of Mining Plan/
Mine Closure Plan

No mine plan is available.

Details of Consultant : This Final Mine Closure Plan has been prepared by Central Mine Planning & Design Institute Limited, an ISO 9001:2008 certified company, established in 1975 as a subsidiary of Coal India Ltd. as an in-house consultant. A Mini-Ratna Company providing consultancy services to various government & private organizations in exploration, mine planning and allied engineering services. Its registered corporate office is situated at Gondwana Place, Kanke Road, Ranchi-834008, a capital city of Jharkhand state. It operates through seven strategically located Regional Institutes over six states of India.

1.1.4 Linked End Use Plant
1.1.5 Distance of End use plant from the pit head of the project in “km”

NF Railway, Tea Garden, etc.

Table 1.1 : Details of End Uses	
Linked end uses plant	Coal supplied to Tea Gardens, Cement Corporation of India (CCI) , Boakajan, Hindustan Paper Corporation Limited, Jagiroad etc. under Open Sale Scheme. Source: Marketing / Sales Dept., NEC
Distance of End use plant from the pit head of the project in KM	• Approximate distance of CCI, Bokajan Assam from the mine is 330 KM (Road distance). • Approximate distance of Hindustan Paper Corporation Limited, Jagiroad, Assam from the mine is 460 KM (Road distance). Source: Google Map.

The coal produced were supplied to Tea Gardens, Cement Corporation of India (CCI) , Boakajan, Hindustan Paper

Corporation Limited, Jagiroad etc. under Open Sale Scheme.
The details are given at table 1.1.

1.1.6	Mode of Coal Transport	LEDO is a abandoned mine and discontinued its production after fire damp explosion in 2008 mines.
1.2	LOCATION, TOPOGRAPHY & COMMUNICATION	
1.2.1	Location of coal deposit (District and State)	LEDO Colliery (UG) is situated in Village- LEDO, PS – Margherita, Sub-division- Margherita, Dist- Tinsukia, State- Assam, Pin- 786181. There is no mine below the surface land of LEDO colliery (UG mine) (Ref para 5 of MoC guideline dtd. 28.10.22).
1.2.2	Communication:PWD roads, railway lines, Air	The LEDO Colliery is well connected by PWD Roads, railway lines, Airports etc. Distance via road – 60 Km from the District Head quarter at Tinsukia. Distance from Dibrugarh Airport – 95 KM Distance from Margherita, Headquarter of NEC – 9 km Road connectivity = NH 315 National High is at 2.5 KM North of the Mine. Ledo railway station about 3 km North West.
1.2.3	Availability of power supply, water etc.	LEDO is a abandoned mine and discontinued its production after fire damp explosion in 2008.
1.2.4	Prominent physiographic features, drainage pattern, natural water courses, rainfall data, highest flood level	Dominant physiographic features & surface features The project is situated along the northern flank of the Naga-Patkai Range and it is characterized by rugged hilly terrain with elevations ranging from lower heights of 225 m RL at the eastern side to 425 m RL in south western side. Generally, the area slopes towards north, however ground elevation from eastern and western sides reduces towards Ledopani Nala which bisects the block. The NH – 315 passes through flat to gently rolling terrain, having elevation of 150 m to 155 m above MSL. Terrain starts rising steeply from

south side of NH –315 and attends an elevation of 365 m to 425 m within a distance of 1.5 km at the middle portion of the project and after that the hill starts to decline. In general, the ground slope is towards north, but it is towards south from mid sector of the project. The Ledopani nala is flowing south to north and passes through east side of the mine, which controls the drainage of the area. The area is highly dissected by rills and gullies, which are discharging the surface run off water to the Ledopani nala. The Ledopani nala is ultimately discharging water into the Dihing River, which is flowing from east to west further north of the area.

Climate & rainfall

The area experiences humid but short summer, a prolonged rainy season, and a fairly cold winter. The temperature in the area ranges from about 6°C during winter about 36°C during summer. Although the monsoon extends from April to October, the area experiences rainfall about 8 to 9 months. The rainfall in the area is very high ranging from 300 to 425cm. Usually dry periods falls between December and March. Yearwise rainfall data is given at table 1.2 and monthwise at Annexure-XIII.

Table 1.2 : Rainfall Data of Near LEDO Colliery

Year	Rainfall	
	In MM	Days
2020-21	3251.65	159
2021-22	2609.32	134
2022-23	2892.82	170
2023-24 (Till Dec'23)	1837.60	121
Source : Project officials		

1.2.5 Important surface features within the project area and major diversion or shifting

Surface right is not available. Some unknown activities are going on and is not under control of NEC.

involved

- 1.3 **DETAILS OF THE ALLOTTMENT AGREEMENT : NA**
1.4 **DETAILS OF THE PREVIOUS APPROVAL OF MINING PLAN : NA**
No approved mine plan available.

Other Legal issues :

Surface right is not available.

- 1.5 **PARAMETERS OF APPROVED MINING PLAN VIS-À-VIS PROPOSED MINING PLAN : NA**
1.6 **Scope & Objective of Study**

Scope

This Final mine closure plan is prepared for LEDO Colliery (UG) in compliance of the guidelines for abandoned/ close/ discontinued before 2009, issued by Ministry of Coal. The broad scope of this report is as given below.

- Identification of activities to be included in the Final Mine Closure Plan of LEDO Colliery (UG mine)
- Financial provisions of mine closure activities, provide details of monitoring, maintenance of records & submission of returns

Objective

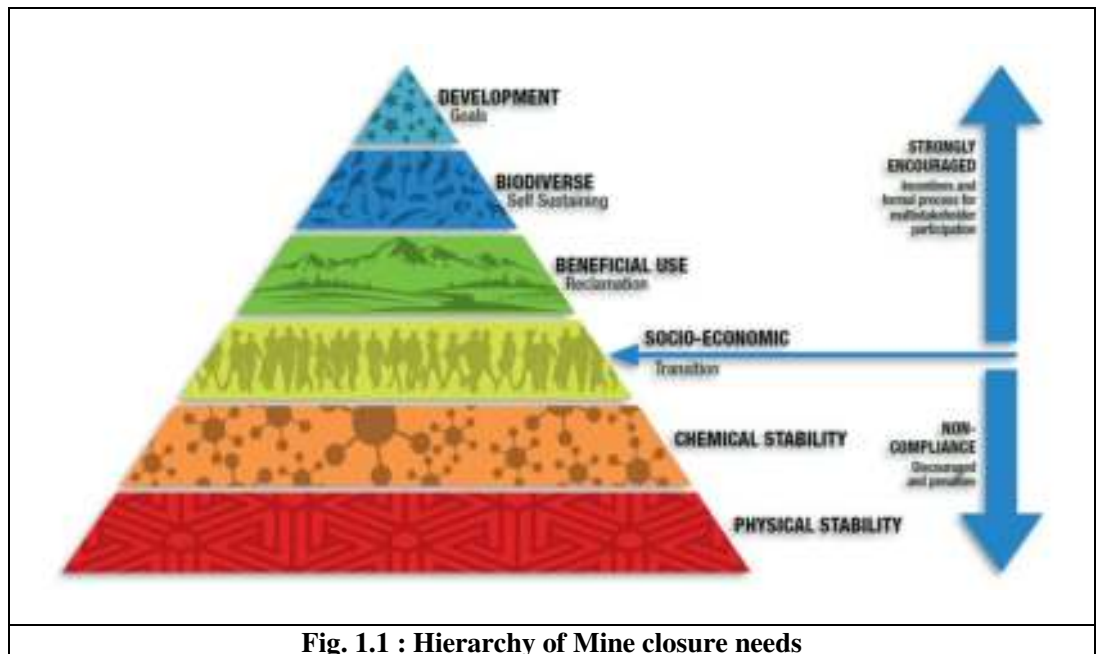
Objective of this study is preparation of Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam.

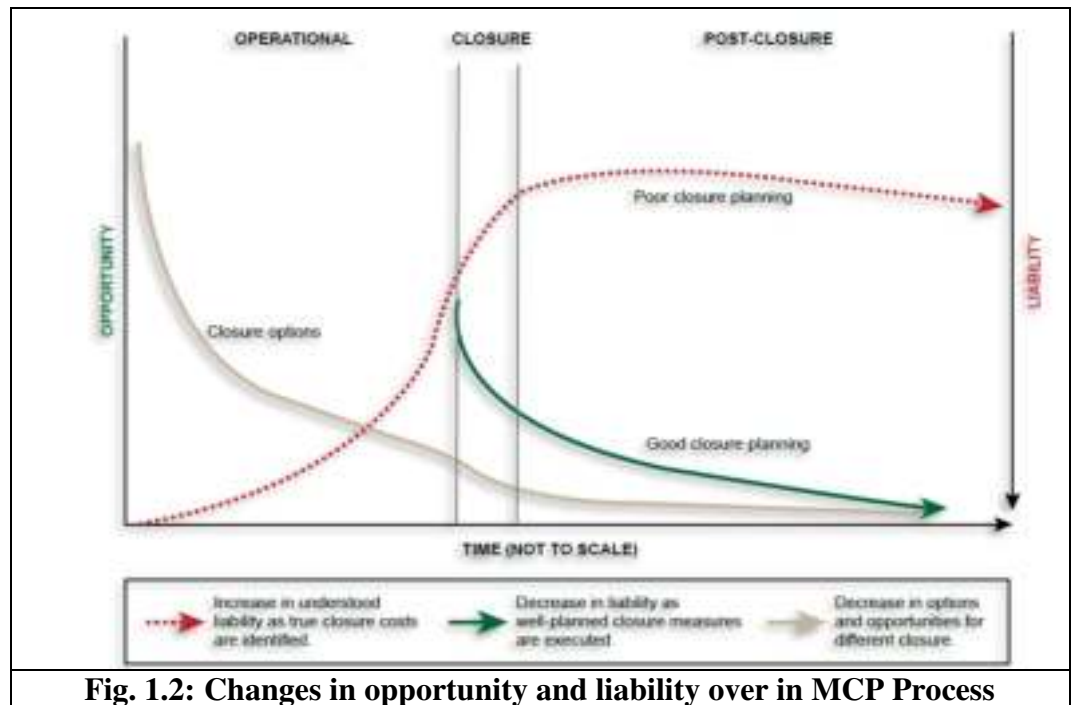
- 1.7 **Need of Mine Closure Planning**

Mining is a hazardous operation as it offsets the equilibrium of natural depositional environment viz. In- situ stress field, ground water, surface drainage system as well as the socio-economic condition. Although mining activities are usually short-term phenomena, they are liable to leave long lasting impacts on landscape, ecology and on the mind set of local inhabitants. LEDO colliery being a closed mine falling in closed mine category as per para 1 of MCP guideline- 2022. Para-2.2 of this guideline insists preparation of FMCP (para 2.2.1), obtaining competent approval (2.2.2) and its implementation (2.2.3). This also encourages to carry all activities in redeem law after the enclosure of the mine, including various project specific economic re purpose activities. The evolution of mine closure practice and the

accompanying regulations have generally moved up the hierarchy of needs shown on Fig. 1.1.

Mine closure encompasses restoration process designed Physical Stability, Chemical Stability, Socio-economic Transition, Beneficial Use – Reclamation, Biodiversity – Self-Sustaining, Development Goals. Mine closure is not just something that happens at the end of a mine's life rather mine closure is an ongoing series of decisions and activities beginning in the pre- mining stage of mine and ending with a creation of self-sustainable site that can be returned to the community. It can provide a net development benefit by providing a long-lasting positive impact in terms of aspects such as community development, education, and economic diversification. Changes in opportunity and liability over mine life is given at Fig. 1.2.





Thus, a mine closure plan needs to define the liabilities, responsibilities and authorities of the different agencies like the mine management, other regulatory bodies, Central and State Governments after mine- closure.

Chapter 2: Exploration, Geology, Seam Sequence, Coal Quality and Reserve

2.1 DETAILS OF THE BLOCK

2.1.1 Particulars of adjacent blocks: North, South, East, West

Mine boundary details are given at table 2.1.

North	Ledopani Nala
South	Ledopani Nala
East	Ledopani Nala
West	Tikak Extension OCP quarry area

2.1.2	Location of the Block District / State	Dist. : Tinsukia, State : Assam
-------	---	---------------------------------

LEDO colliery is located on toposheet no. 83 M/15 (G46F15) of Geological Survey of India. (Plate 2.2).

1	Baragolai Gaon Panchayat	• Baragolai Electric Line • LEDO Gaon 1 and 2 • Baragolai grant 11 • Lekhapai Nepali Gaon, • Jamadar Basti, • Baragolai Telkhat
2	Samukjan Gaon Panchayet.	• Tirap Gaon • Ledo Bangali Gaon • Mulang Bengali Gaon No. 1 & 2 • Ledo Coal Para Gaon • ChiPe Gaon.
3	Ledo Gaon Panchayat	• Matikhad Basti • Ledo Jharna Basti. • Ledo Airfield. • Ledo Railway Colony.

List of villages are given at table 2.2.

2.1.3 Area of the Block “Ha”

2.1.4 Area of the geological block projectized “in Ha” (Area of the geological block considered for liquidation of coal reserve)

Description of Mine Area :

Details of land in LEDO Colliery (UG mine) are given in table 2.3. A view towards LEDO colliery from Tirap OCP is shown at Fig. 2.1.

Table 2.3 : Details of land in LEDO Colliery (UG mine)					
SL NO.	Particulars	Land in Ha			Remarks
		Forest	Non Forest	Total	
		(A)	(B)	A+B	
1	Ledo Nala over UG working	0.12	0.17	0.29	As per limits of UG working Falls under 4 Sq. mile Mining Lease and Namdang Coal Grant Mining Lease.
2	Non CIL Activity	2.93	7.47	10.4	
3	Present working of Tikak Extn. OCP	0	0.05	0.05	
4	Other UG Working	5.13	6.63	11.76	
	Total	8.18	14.32	22.5	



Fig. 2.1 : A View towards LEDO colliery from Tirap OCP

- 2.1.5 Balance area yet to be projectized “Ha” NA
- 2.1.6 Likely Reserve in the area yet to be projectized “Mte” NA
- 2.1.7 Cardinal Point Co-ordinates of the non- coal/lignite bearing area/existing mining lease outside the allotted Geological Coal/Lignite block (Duly certified in line with para 1.9 of the Guideline, if fresh inning lease required)

Coordinates of LEDO are :

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Latitude	27	°	16	'	36	"	N
	27	°	16	'	56	"	N
Longitude	95	°	45	'	5	"	E
	95	°	45	'	34	"	E

2.1.8 Certificate of **Qualified person/ Accredited Mining Plan preparing agency (MPPA)** if the project area is confined within the vested/allotted block boundary/existing mining lease : Enclosed as Annexure II.

The Project area, Lease area and geological block area in “Ha” shall also be envisaged. Project Area is confined within the existing mining lease.

Description of Lease Area

Worked-out area of LEDO Colliery is 22.50 Ha as per details provided by the Project. Mine falls under 4 Sq. Mile Mining Lease (Ledo-Baragolai Mining Lease) (Table 2.4) (Plate 2.1). This mining lease was inherited by Coal India Limited from its predecessor Assam Railway and Trading Co. (AR&T). Other details are given at table 2.4.

Table 2.4: Details of land in Lease Area LEDO Colliery				
Sl No.	Particulars of Lease	Land in Ha		
		Forest	Non forest	Total
1	4 Sq. Mile Mining lease	8.18	14.32	22.5
2	Others	0	0	0
	Total	8.18	14.32	22.5

Table 2.5 : Acquisition of rights of owners in respect of coal mines				
Owners in relation to coal mines transferred to and vested free from all encumbrances. One of the mines amongst 711 transferred and vested as per CM(N) Act, 1973.				
Sl no.	Name of mine	Location of mine	Name and address of owners of the mine	Amount (in Rupees)
4	LEDO	Post office - LEDO	Assam Railways and Trading Company Ltd., Margherita	4884000
Source: 1. The Schedule (as per section 3 of chapter II, 8 of chapter III and 18 of chapter VI) of ‘Coal Mines (Nationalisation) Act, 1973, no. 26 of 1973 dtd. 30 th May 1973, Part-II, The Gazette of India Extraordinary, pp. 302 1. The Coal Mines Nationalisation Laws (Amendment) Act, 1986, No. 57 of 1986, Dtd. 15 Dec, 1986.				

The Mining lease has been renewed/extended by Mines & Minerals Department, Government of Assam vide ECF No. 230562/92 dated 03.12.2022 (Annexure- XVI). Ledo UG shares its lease with Baragolai Colliery (UG Mine) and falls under 4 Sq. Mile Mining.

2.1.9 KML file of the Proposed lease area, Project Area and geological block. Given at Plate 2.1.

- 2.1.10 Whether the proposed project area is confined within the allotted block boundary/existing mining lease, if not, the reason for deviation from allotted block boundary, may be given. Project Area is confined within the existing mining lease.
- 2.1.11 If the project area extends outside the allotted block boundary/existing mining lease, confirmation about non-occurrence of coal/lignite in the area under reference needs to be furnished NA
- 2.1.12 Type of the Project (Operating / under Implementation) and year of Starting. Production records are available since 1973-74.
- 2.2 EXPLORATION, GEOLOGY AND ASSESSMENT OF RESERVE**
- 2.2.1 Regional geological set up of the area, local geology, structure, stratigraphic sequence, characteristics of the litho-logical units (coal seams /partings/overburden).
General Geology
- The mining activities are mainly concentrated in Makum Coalfield. The formations of "Makum Coalfield" belong to tertiary period and have been subjected to heavy tectonic movement, resulting into the numerous geological disturbances, which has prematurely matured the coal. Most of the coal seams occur either as syncline or anticline having steep dips. The coalfield generally has highly rugged hilly terrain, covered with thick, luxuriant, evergreen forests inhabited by a sparse population of Naga tribes. Numerous rivulets flowing through the valleys, cut across the coalfield.
- 2.2.2 Local geology, Structure, Stratigraphic sequence, Characteristics of the litho-logical units (coal seams /partings/overburden).

Coal Seam

There are in general five coal horizons namely 60 feet, 20 feet, 5 feet, 7 feet and 8 feet in Makum coalfield. 60' seam and 20' seams are more prominent in the opencast able areas, whereas 5' seam is also sometimes workable in the mine take area. 7 and 8' seams are very impersistent in nature and are generally not considered for exploitation. The coal seams are mostly inter-banded. The position and thickness of the bands vary considerably within a short distance. Roof and Floor of the seams are weak. A sticky clay band generally occurs just below the main coal seam (60 seam). The coal is soft and friable. Though the inherent ash content of the coal is only 4% to 6%, the inter-banded nature of the seam raises the ash content of the mined out ROM coal to a considerably

higher level. The coal has good caking properties, but it also contains high sulphur (3-6%), which restricts its use as prime coking coal. Details about seam worked are given at table 2.6.

Table 2.6 : Details about the Seams			
Coal seam	Thickness (m)		Geological Reserve (Mt)
	Minimum	Maximum	
L1	0.20	1.50	
Parting	27.90	61.50	
Local (T)	1.80	2.40	0.8029
Parting	1.20	6.10	
Local (B)	0.20	1.80	
Parting	12.00	45.80	
L2	0.15	1.86	
Parting	26.90	67.40	
L3	0.10	2.20	
Parting	26.40	39.30	
8 ft.	0.20	2.60	0.5968
Parting	20.50	45.85	
5 ft.	0.20	2.10	0.5477
Parting	15.20	32.20	
20 ft. (T)	2.20	4.10	1.4346
Parting	2.10	42.00	
20 ft. (B)	1.10	14.35	3.8409
20 ft. (T+B)	4.05	9.00	1.6853
Parting	30.85	81.50	
New Seam (T)	2.40	4.30	3.2472
Parting	1.45	10.70	
New Seam (B)	0.70	6.65	2.98
New Seam (T+B)	3.75	9.55	0.7018
Parting	3.27	18.10	
60 ft. (T3+T2+T1)	2.30	5.98	2.0324
60 ft. (T2+T1)	3.50	3.80	
Parting	1.05	16.45	
60 ft. (B3)	3.00	6.35	14.5456
Parting	1.45	3.00	
60ft. (B2+B1)	5.40	11.45	
60 ft. (B3+B2+B1)	2.05	19.20	
TOTAL RESERVES			32.4152
Source : Marginal Scheme for Opening an Underground Mine at Ledo Colliery, NEC, Aug, 2010			

- 2.2.3 Geological Block Area “Ha” NA
- 2.2.4 Status of Exploration of the block
- 2.2.5 Area covered by ‘detailed’ exploration within NA the block (sq. km)

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

2.2.6	Whether entire lease area has been covered by ‘detailed’ exploration.	NA
2.2.7	No. of boreholes drilled within the block	NA
2.2.8	Whether any further exploration/study is required or suggested and time frame in which it is to be completed	NA
2.2.9	Year wise future programme of exploration	NA
2.2.10	Overall borehole density within the block (no./ sq. km) approx	NA
2.2.11	No of Seams available as per GR (Geological Report)	18
2.2.12	Seams not considered for Mining with Reasons	16
2.2.13	Dip of the Seam	
2.2.14	Seam wise thickness, depth and reserve	Given at para 2.2.2
2.2.15	Methodology of reserves estimation (also mention if any software package has been used).	NA
2.2.16	Average GCV “KCal/kg”	NA
2.2.17	Gross Geological Reserve of the block “Mte”	32.4152 Mt
2.2.18	Net Geological Reserve of the block “Mte”	NA
2.2.19	Minable Reserve of the block “Mte”	NA
2.2.20	Blocked Reserve “Mte	NA
2.2.21	Corresponding extractable reserve of the block “Mte”	NA
2.2.22	Percentage of Extraction	NA
2.2.23	Reserve already depleted (Base date of Mining Plan)	NA
2.2.24	Balance Reserve (as on Base Date)	NA

Chapter 3: Mining

3.1 MINING METHOD

- 3.1.1 Existing method of mining if the mine is under operation

LEDO is a discontinued mine abandoned after fire damp explosion in 2008.

The mining activities are mainly concentrated in Makum Coalfield. Active mining in the Makum Coalfield has been going on since the colliery started operations at Ledo in 1882. Underground workings located in Ledo Collieries were lying on the northern part of the Lachitkhaní block in the northern limb of Namdang syncline. This UG mine had two entries through two dips namely main dip and companion dip (Plate 3.1). The main dip was used primarily for material transportation and dip drivage, whereas companion dip is used for Coal haulage. Both the entries were being used as main intakes for mine ventilation. A drift connecting the stone drivage at -1L with the surface was equipped with an exhaust fan and was used as main return airway. Both 20 feet & 60 feet coal horizon were worked. The method of work, being practiced in the underground mines of LEDO UG was is termed scraper assisted chamber method. The permission under regulation 100A of CMR-1957 to extract pillars in 20' seam panel by scraper assisted chamber method of mining by caving and extraction of pillars in panel 1 in 20' seam by scraper assisted chamber method (Source AMP) was accorded to NEC. The general dip of the seam is 20° to 25°. Owing to a mine accident on 04.11.2008, the mine (i.e. Ledo Colliery located in the west of Ledopani River) was discontinued and the inclines mouths were sealed-off effectively. At the time of discontinuance, the mine was worked upto 163m R.L. Development and depillaring was being done in 20 ft. seam. Main pumping station was at (-)5L. Production since nationalisation is given at Table 3.1.

History of fire

The mine had experienced UG fire due to spontaneous heating in the goaved-out area (between (-)5L and (-)4L in 3rd raise) of 20 ft.

seam (panel-2) on 10.10.1998. The panel was isolated by erecting explosion-proof isolation stoppings.

History of Inundation

Due to heavy seepage of water from 60ft. seam SP-1A Panel ((-)3L , 5 no. 'churi') to the tune 1500 GPM and inadequate pumping capacity of the mine, the mine got drowned on 12.07.1999. Later, it was reopened on 11.09.1999. This was repeated on 28.08.2000 at SP-2A Panel of 60 ft. seam (between (-)1L to (-)2L, 5 no. 'churi') and the mine was dropped upto (-)4L.

History of Explosion

On account of firedamp explosion on 04.11.2008, the incline mouths (three nos.) were sealed off under imposition of section 22(3) of the mines Act, 1952 by DGMS on 07.11.2008. Subsequently, a notice of discontinuance was submitted to DGMS. Presently, no mining activity is being carried out in Ledo UG (Western Section) Mine.

3.1.2 Proposed method of mining with justification on suitability of method of mining

Location of Mine Opening:

This is closed mine. As per project officials there were 3 openings and were sealed after firedamp explosion in 2008.

3.1.3 Coal production capacity proposed "Mtpa"

This is closed mine.

3.1.4 Justification for Coal production capacity optimization

Date of abandonment

The Project was discontinued from 07.11.2008. The notice of abandonment in Form-I along with abandoned mine plan was submitted to DGMS on 19.11.08.

Reason of abandonment

The mine was closed due to following reasons:

On account of the fire damp explosion on 04.11.2008, the inclined mouths were sealed off under imposition of Section 22 (3) of the Mines Act. 1952 by DGMS on 07.11.2008. Subsequently, a notice of discontinuance was submitted to DGMS.

Source: Abandoned Mine Plan submitted to DGMS 19.11.08.

[Annexure-X]

3.1.5 Calendar year from which the production will start

Closed Mine. Production figure given in table 3.1.

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3.1.6 Year of Achieving rated NA
Production

3.1.7 Tentative Coal production Plan “MT” : Production since 1974 is given as under:

Table 3.1 : Production since 1974 for LEDO Colliery						
Year		Coal Production Schedule			OB “MM3”	SR
Year of Operation	Calendar Year	UG	OC	Total		
1973-74	1973-74	7410	0	7410	0	NA
1974-75	1974-75	18522	0	18522	0	NA
1975-76	1975-76	36142	0	36142	0	NA
1976-77	1976-77	47008	0	47008	0	NA
1977-78	1977-78	39012	0	39012	0	NA
1978-79	1978-79	27527	0	27527	0	NA
1979-80	1979-80	23590	0	23590	0	NA
1980-81	1980-81	29463	0	29463	0	NA
1981-82	1981-82	41494	0	41494	0	NA
1982-83	1982-83	42113	0	42113	0	NA
1983-84	1983-84	36394	0	36394	0	NA
1984-85	1984-85	31777	0	31777	0	NA
1985-86	1985-86	44831	0	44831	0	NA
1986-87	1986-87	58776	0	58776	0	NA
1987-88	1987-88	40000	0	40000	0	NA
1988-89	1988-89	55308	0	55308	0	NA
1989-90	1989-90	76129	0	76129	0	NA
1990-91	1990-91	65422	0	65422	0	NA
1991-92	1991-92	88577	0	88577	0	NA
1992-93	1992-93	95179	0	95179	0	NA
1993-94	1993-94	100258	0	100258	0	NA
1994-95	1994-95	103212	0	103212	0	NA
1995-96	1995-96	62867	0	62867	0	NA
1996-97	1996-97	50518	0	50518	0	NA
1997-98	1997-98	63361	0	63361	0	NA
1998-99	1998-99	36238	0	36238	0	NA
1999-2000	1999-2000	4002	0	4002	0	NA
2000-01	2000-01	51484	0	51484	0	NA
2001-02	2001-02	50317	0	50317	0	NA
2002-03	2002-03	19700	0	19700	0	NA
2003-04	2003-04	27239	0	27239	0	NA
2004-05	2004-05	30070	0	30070	0	NA
2005-06	2005-06	30250	0	30250	0	NA
2006-07	2006-07	24521	0	24521	0	NA
2007-08	2007-08	20767	0	20767	0	NA
2008-09	2008-09	12072	0	12072	0	NA
2009-10 onwards	2009-10 onwards	0	0	0	0	NA
Total		1618090	0	1618090	0	

3.1.8 **Rated Capacity “Mtpa”** Closed Mine

3.1.9 **Life of the mine: “Years”** Closed Mine

- 3.1.10** Whether the proposed external OB dump site is coal/ lignite bearing: If so, whether coal/lignite below waste disposal area is extractable. NA
- 3.1.11** Whether negative proving for coal / lignite in the proposed site for OB dump/ infrastructure has been done. NA
- 3.1.12** Results of any investigation carried out for scientific mining, conservation of minerals and protection of environment; future proposals. NA
- 3.1.13** Type of Equipment/ HEMM proposed NA

Chapter 4: Safety Management

4.1	Safety Management	
4.1.1	Important safety aspects: Major Risks and uncertainties to the project viz. Proximity to river, adjacent working, geo-mining disturbances, slope stability and remedial measures suggested. It should also include proposed overall slope of the quarry and OB dump, dump height, strata control, fire and spontaneous heating, gas monitoring, disaster management, danger from inrush of water etc.	LEDO Colliery was underground mine. All important safety measures were being adopted as per different statute. Production from mine was closed in 2008. Non-CIL activities (unknown activities) are going on the surface which is not under control of NEC.
4.1.2	A Commitment from the Company Board that entire mining operation will be carried out as per the Statutory provision given under Mines Act 1952, Coal Mine Regulation 2017 and & wherever specific permission will be required the company will approach the concerned authorities.	Mines were running as per provisions of Mines Act 1952 and Coal Mines regulation 1957. The mines were discontinued in 2008 due to firedamp explosion.

Chapter 5: Infrastructure Facilities

5.1 Mine infrastructure required e.g. Equipment maintenance planning, Office buildings, Workshop, Power supply arrangement, Water supply etc.

As per details provided by Project, working area of LEDO Colliery is 22.50 Ha. There is no traces of office and other infrastructure on the surface.

From the information provided by the NEC, the facilities like canteen, office, Survey office, manning Staff room , water tank, pump house, Fan House during the working period might be present at the site. Though at present, there are no traces of these infrastructures. SO they are not considered (left out) for FMCP. They might have been dismantled earlier or are dozed by Non-CIL activities carried out by unknown entities. Unknown huts are present which are required to be dismantled with help of State Machinery. Infrastructure/area like Substation, two edit – Main dip & Comp Dip, Fan house (Stone drift), surface area over UG Working are the part of the boundary of this FMCP.

Details of infrastructure in LEDO Colliery left out from the FMCP boundary and included in the boundary are shown at table 5.1.

Table 5.1 : Details of infrastructure in LEDO Colliery		
Sl no.	Description	Remarks
A	left out from the FMCP	
1	Siding, CHP, Workshop, Store	Railway line already dismantled.
2	Agent/ PO office	Already Dismantled
3	Time office, Canteen, Survey office, Staff room	Already Dismantled
4	Water tank, Pump house, Gan House	Already Dismantled
5	Colony	Already Dismantled
B	Included in FMCP	
6	Adit	Partially dozed
7	Fan House	Partially Dozed
8	Mine Working	Non CIL Activity were going on.
9	Substation	Already Dismantled
C	Not Applicable	
10	CPP	Not Applicable.
11	haul roads	Not Applicable

As informed by NEC, that they do not possess surface right over the boundary proposed for FMCP. At the time of visit several Non-CIL activities carried out by unknown entities over 10.40 Ha in three patches identified. Photographs were taken from Tirap OCP, a sister colliery of NEC. (Fig. 5.1). The extent of unknown activity is shown in Fig. 5.2.



Fig. 5.1 : A view of LEDO Colliery

- | | | |
|------|--|--|
| 5.2. | Power supply & illumination system ofor mining activities have already illumination. | been dismantled and facilities of power supply to nearby has been handed over to state government at the time of surrendering the lease. |
| 5.3 | Drainage & Pumping :
Assessment of Volume of Water for Pumping, Pumping Capacity and Pump Selection | Pump & Pumping arrangements have already been dismantled.
Bunkers, haulage, conveyor and UG equipment have already been dismantled. |
| 5.4 | Coal Handling Arrangement:
Brief detail of the CHP/ Mode of Dispatch, Coal quality and Coal | This is closed mines closed in 2008. There is no traces of CHP. This has been dismantled. |

staking and
handling
arrangement

- 5.5 Coal washing This is abandoned mine.
and the
proposed
handling/
disposal of
rejects.

Chapter 6: Land Requirement

6.1 LAND REQUIREMENT

6.1.1 Total Land requirement for the mine in “Ha”

Break up of land type is given at table 6.1 and plate 6.1._____.

Table 6.1 : Break up of land type		
Land Type		Area (Ha)
Tenancy	Agricultural	0
	Township	0
	Grazing	0
	Barren	0
	Water Bodies	0
	Road	0
	Community/other use	0
Govt Non Forest	Agricultural	0
	Township	0
	Grazing	0
	Barren/other use	14.32
Forest	Reserve	8.18
	Protected	0
	GMJJ / Revenue	0
Freehold		0
Total		22.50
Source : Plate no. 5.1 / NEC Area		

6.1.2 During mining Land use details:

Landuse during mining (Present land use) is given at table 6.2 and plate 5.1.

Table 6.2 : Breakup of present landuse			
	Description	Present/ Existing (Ha)	Present Status
A	Quarry Area (Present working of Tikak Extn. OCP)	0.05	NA
B	Surface Degraded over UG working area due to Non-CIL activity.	10.40	NEC do not possess surface right of the area
C	Remaining UG Working	11.76	
C.1	Other UG Working Area other than infrastructure like Adit, fan house etc.	11.55	
C.2	Infrastructure area Road/ Adit, Fan house, substation etc.	0.21	

Table 6.2 : Breakup of present landuse			
	Description	Present/ Existing (Ha)	Present Status
D	Agriculture	0	
E	Plantation	0	
F	Waste Land	0	
G	Water body	0.29	
H	Habitation	0	
I	Others (Please Specify)	0	
Total		22.50	

Post closure Land use for LEDO Colliery is given at table 6.3 and plate no. 6.2.

Table 6.3 : Post closure Land use (LEDO)									
Type	Land use (Proposed)	Land Use (End of Life)	Land Use (Post Closure)						
			Agricul tural land	Plant ation	Water Body	Public/ Compa ny Use	Forest Land	Undist urbed	Total
Excavation Area	0	0	0	0	0	0	0	0	0
Backfilled Area	0	0	0	0	0	0	0	0	0
Excavated Void	0	0	0	0	0	0	0	0	0
Without plantation	0	0	0	0	0	0	0	0	0
Top Soil Dump	0	0	0	0	0	0	0	0	0
External Dump	0	0	0	0	0	0	0	0	0
Safety Zone	0	0	0	0	0	0	0	0	0
Haul Road between quarries	0	0	0	0	0	0	0	0	0
Road diversion	0	0	0	0	0	0	0	0	0
Diversion/ below River/Nala/ canal	0	0	0	0	0	0	0	0	0
Settling pond	0	0	0	0	0	0	0	0	0
Road & Infrastructure area	0	0	0	0	0	0	0	0	0
Rationalization area	0	0	0	0	0	0	0	0	0
Garland	0	0	0	0	0	0	0	0	0

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drains									
Table 6.3 : Post closure Land use (LEDO) Contd...									
Type	Land use (Proposed)	Land Use (End of Life)	Land Use (Post Closure)						
			Agricultural land	Plantation	Water Body	Public/ Company Use	Forest Land	Undisturbed	Total
Embankment	0	0	0	0	0	0	0	0	0
Green Belt	0	0	0	0	0	0	0	0	0
Water Reservoir near pit	0	0	0	0	0	0	0	0	0
UG entry	0	0	0	0	0	0	0	0	0
Undisturbed / Mining right for UG	22.50	22.50	0	0.30	0.44	1.26	8.06	12.44	22.50
Resettlement	0	0	0	0	0	0	0	0	0
Pit head power plant	0	0	0	0	0	0	0	0	0
Water harvesting	0	0	0	0	0	0	0	0	0
Agricultural land	0	0	0	0	0	0	0	0	0
Total	22.50	22.50	0	0.30	0.44	1.26	8.06	12.44	22.50

6.1.3 Surface features over the Discontinued mines after firedamp explosion in 2008. block area

6.1.4 No. of villages/Houses to be NIL shifted

6.1.5 Population to be affected by NIL the project

6.1.6 Proposed Rehabilitation NA programme

6.2 DETAILS OF LEASE

6.2.1 Status of Lease Given in chapter 2 at para 2.1.8

The Mining lease namely 4 Sq. Mile Mining Lease has been renewed/extended by Mines & Minerals Department, Government of Assam vide ECF No. 230562/92 dated 03.12.2022 and letter no. PEM.67/2021/83 dated 22.02.2022 respectively.

6.2.2 Existing Lease Area "Ha" 22.50 Ha (Ledo Colliery Mine Area taken as FMCP Boundary)

6.2.3 Period for which Mining Lease has been granted/is to be renewed/ is to be applied for. Upto 2030..

6.2.4 Date of expiry of earlier Mining Lease, if any NA

6.2.5	Whether the lease boundary/ required boundary is same as mentioned in the allotment order	NA
6.2.6	Lease Area (applied/ required) as per the Mining Plan under consideration (Ha)	NA
6.2.7	Whether the applied lease area falls within the allotted block	NA
6.2.8	Area (Ha) of lease which falls outside the delineated Block Boundary/Existing Mining Lease	NA
6.2.9	Details of outside area:	
	Whether forms part of any other coal block	NO
	Whether it contains any coal/lignite reserves	Yes
	Purpose for which it is required, e.g. roads/ OB dumps/ service buildings/ colony/ safety zone/ others (specify)	NA
6.2.10	Whether some part(s) of the allotted block has not been applied for mining lease.	NA
	Total area in Ha of such part(s).	NA
	Total reserves in such part(s). (Mt)	NA
	Brief reasoning for leaving such part(s)	NA

Chapter 7: Environment Management

7 ENVIRONMENTAL MANAGEMENT

7.1 Commitment from the project proponent that the company will comply Environment and Forest Condition stipulated in the respective clearances.

Environment clearance and forest clearance were not available. The mine were reported to be running on consent and discontinued after firedamp explosion in 2008.

7.2 Water Quality Management

Mine Water Discharge

There were three numbers of entries in LEDO Colliery viz. Adit-A, Adit-B and fanhouse. These entries to the mine were securely sealed for safety purposes. These structures has been dozed by Non-CIL activities carried out by unknown entities. No discharge were observed during the visit. Earthen Drain is already present to carry surface runoff to be strengthened along the proposed embankment (Fig. 7.1) along Ledo Pani Nalla. . As the area is hilly terrain garland drains along the other peripheral part is proposed. (approximate length including kutta drain 1 km)



Fig. 7.1: Embankment to the side of Ledo Nalla



Fig. 7.2: Discharge from Surface runoff

Ledo Pani Nala is situated near to the mine (Fig. 7.2). Ledo Pani nala is flowing south to north and passes through east side of the mine, which controls the drainage of the area. The area is highly dissected by rills and gullies, which are discharging the surface run off water to the Ledopani nala. The Ledo Pani nala is ultimately discharging water into the Dihing River, which is flowing from east to west further north of the area. Ledo Pani Nala is situated near the mine. However, mine entries are not visible at present and no mine discharge has been observed.

Water Quality Monitoring

Table 7.1 : Water Quality Monitoring Station		
EQ monitoring	LEDO Colliery	Within 5 km of Project
Surface Water	Nullah Near NH 38	- Downstream of Tirap River. - Sipe Gaon Nallah water - K Drift Drain- Near Tikak - Down Stream of Ledo Pani Nallah
Drinking Water	Tubewell water nearby colony	- Tube well water of Samukjan Village - Tube well water of Sipegaon
Effluent water		- West Mine Raw Water - Treated Water of Neeutralisation pond- Tirap - Treated Water – Near Tikak

From the water quality report (Annexure XII) it is found that the all the parameter are within statutory limit. The different locations at which water quality was monitored is given at table (Table 7.1).

7.3 Air Quality Management

Mines has already been closed in 2008, and there is no source of dust & fumes from colliery. From the records available at project and NEC, air quality is being regularly monitored. From the Environmental quality report (Annexure XII) it is found that the all the parameter of air quality was within statutory limit. The different locations at which water quality was monitored is given at table (Table 7.2).

Table 7.2: Air Quality Monitoring Station	
EQ Monitoring	
Ambient Air	• Near (Manager off.) of Tirap Colliery • Tirap West mine • Sipegaon • Ledo Gaon, Perofield. • Pacha Gaon • Malamkhan Gaon • Near Mulugaon No. 2 • Kolpara Gaon – Near Panchayat office • Pit no. 1 – Ledo

7.4 Management of waste, topsoil, rejects etc.

This is Underground colliery and discontinued after firedamp explosion in 2008. No records for management of waste, coal rejects, availability of UG equipment are available.

Chapter 8: Final Mine Closure Plan

LEDO Colliery is a closed mine. In case of closed mines, the owner of the concerned mine shall prepare a Final Mine Closure Plan. The final mine closure plan should be prepared as per the Guidelines for preparing the Mining Plan and Mine Closure Plan dated 29th May 2020. LEDO Colliery being abandoned mine before 2009, only final mine closure has been prepared. Now Final mine closure plan has been prepared in light of guidelines dated dtd. 28.10.22.

Guidelines for Abandoned/Closed/Discontinued Mines

1st Mine closure guidelines were issued by Ministry of Coal (MoC), Government of India (GoI) on 27 August, 2009. Another guideline for preparation of MCP was issued on 11 January 2012. And finally other guideline was issued on 16th December 2019, which superseded any previous orders and are without prejudice to any other relevant rules and regulations, such as those issued by the state government, Ministry of Environment, Forest and climate change, Ministry of Labour and employment, etc. These guidelines issued for preparation of MCP were silent for the coal mines which were discontinued / abandoned / closed before 2009. Thereafter several notification/amendment dtd. 29th May 2020,, 19th May 2021, 28.10.22 from MoC regarding preparation, formulation, submission, processing, scrutiny, approval and revision of mining plan for coal and lignite blocks. The MCP happens to be part of mine plan. It was observed that before 2009, a considerable number of coal mines were abandoned, closed, or discontinued without any specific guidelines from the Ministry of Coal. Addressing this issue for the benefit to the community, curbing illegal mining, and ensuring safety while repurposing the mined-out land, the need was felt that these mines are closed in a scientifically sound manner. Thus, MoC, GoI vide notification no. MPS/2/2022-MPS on dated 28th October 2022 published a guideline for the Management of Mines discontinued/ abandoned/ closed before 2009. This guideline was to provide direction to all coal companies, including lignite, that possess abandoned, discontinued, or closed mine after the nationalization of coal mines until 27th August 2009 (the date of issuance of first coal mines closure guidelines). This guideline is intended to provide an overall framework for the mine closure process. The details of final implementation plans are to be finalized and approved by the respective Company Boards. The overall goal of the guideline is to restore the mined-out land as far

as possible to its pre-mining stage by bringing ecological balance and purposefully reutilizing the land for the benefit of the country.

Various provisions in the guideline dtd. 28.10.22 are at table 8.1.

Table 8.1 : Provisions in the guideline dtd. 28.10.22		
Sl. No.	FMCP Guidelines	para of MoC guideline dtd. 28.10.22
1	Categorisation of Non Operational mines into Discontinued/ Abandoned/ closed mines	1.3
2	Steps to be taken by mine owners to manage the non-operational mines.	
a	Preparation of FMCP	2.2.1
b	Approval of FMCP	2.2.2
c	Implementation of FMCP	2.2.3
d	Alternate use of reclaimed land	2.2.4
3	Social support measures	
a	Air, Water and Soil monitoring of the region surrounding 5 kms of discontinued/ abandoned mines should be monitored as per MoEFCC/CPCB standards	3.1
b	Health camps must be organized on monthly basis to monitor the health of the population residing within 05 km of the discontinued/ abandoned mines	3.2
c	A careful consideration is to be given to provide reskilling to the willing workers as per their need for their gainful employment	3.3
4	Financial Provisions	
a	Financial provisions for closure activities of FMCP.	4
b	Closure cost to be estimated on required activities.	4
5	Maintenance of records & submission of returns	6
6	Monitoring	7

In reference to para 2.1.1. of guideline dtd. 28.10.22 regarding approval of the re-organisation, action has already been taken by mine management of NEC in 2010. To Initiate mining at the east side of the Ledo Colliery a Scheme named “Marginal Scheme for Opening an Underground Mine at Ledo Colliery, NEC” was prepared in August 2010, However, it was not financially viable as a stand-alone project. No Short-term economic activity has been done over the mine working area has been done in recent past.

8.1 Land Degradation and restoration Schedule

- 8.1.1 This is closed mines. The details of mined out area along with present landuse given at para 6.1 of chapter 6.

Management of Mined out Area

There is no occurrence of surface subsidence as reported by project. Hence, there is no impact on the surface land use due to UG unit. Status of entries of Colliery is given at para 8.9.

Also, as per para 8.10.1 of MoC guideline 2020, subsidence monitoring for 5 years is proposed as an activity of this FMCP. Subsidence monitoring report may be prepared from CMPDI or other government agencies and be implemented by NEC.

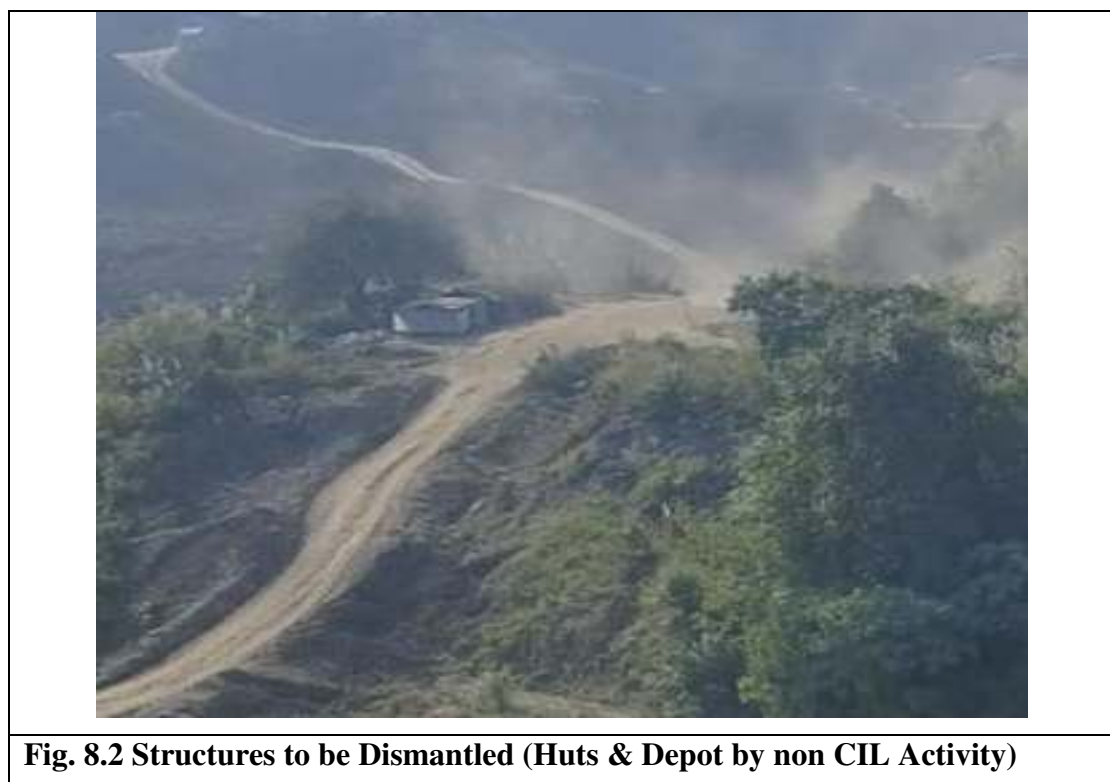
Dismantling Activities

List of Dismantling Activities are tabulated at table 8.2.

Table 8.2 : Dismantling Activities			
	Description	Status	Remarks
A	Existing conveyor belt	Not Applicable	No structure present at the mine site.
B	Pit Office, Workshop, Colony	Not Applicable	
C	Agent/ PO office, Survey office, Store, Time Office	Not Applicable	
D	Power House, Sub Station, Power Lines, Pumps and Pipes/ other facilities, Fan house	Not Applicable	
E	Unknown huts, Fanhouse	To be dismantled	

Bunkers, Pumps, pumping arrangement, haulage, conveyor and UG equipment have already been dismantled. Few photographs which is under dismantling activities are

at Fig. 8.1 & Fig. 8.2. The Fan house and the wall near store needs to be dismantled along with some huts/structures constructed by Non-CIL activities carried out by unknown entities. These activities require support from State machineries.



Financial provision and closure cost are given at Para 8.10.

8.1.2 The offices, workshop, recreation club, post office, dispensary, weighbridge, time office, vehicle shed, Colonies etc. of LEDO colliery has been dismantled long back. Certain unknown activities are going on, which is not under control of NEC. NEC does not have any surface right over the UG working and as such no activity over the surface has been proposed except the strengthening of embankment, garland drains from protecting the inrush of water to Ledopani nala. Financial provision and closure cost are given at para 8.10.

8.2 Post Closure Water Quality Management:

From the water quality report (Annexure XII), it is found that the pH of water is within the discharge standards. Also Iron (Fe) and other heavy metal were found within the limit. The surface run-off may carry high proportion of suspended solids as such surface-runoff shall be routed through garland drain. Green belt may be developed with suitable species of plants in consultation with State forest department or any other government agency suitable for the purpose.

Post Water Quality Monitoring

Since the FMCP of this mine is being prepared, as per guideline monitoring of water quality would be continued for a period of 3 years after the approval of final mine closure. It is proposed to monitor water quality at 4 locations (one effluent water, 2 surface water and one drinking water). If any deviation from the prescribed water quality standard is detected, the appropriate remedial actions shall immediately be enforced and frequency of sampling shall be increased till the water quality becomes normal. The test results would be compared with the standards prescribed by the MoEF&CC and if any deviation is detected, remedial actions would be immediately taken to bring the water quality standard within the prescribed limits. There is sufficient monitoring station on which NEC is measuring EQ. However, monitoring station and frequency of sampling for this FMCP to be fixed in consultation with Pollution Control Board. The cost of post closure water monitoring has been provided at para 8.10.

8.3 Post Closure Air Quality management

Mines has already been discontinued since 2008, and there is no source of dust & fumes from LEDO colliery. However, water sprinkling would be done on the roads, as and when

necessary. Since the FMCP of this mine is being prepared, as per guideline monitoring of air quality would be monitored for a period of 3 years after approval of FMCP. It is proposed to monitor Air quality at 4 locations. The test results would be compared with the standards prescribed by the MoEF&CC and if any deviation is detected, remedial actions would be immediately taken to bring the AAQ standard within the prescribed limits. However, monitoring station and frequency of sampling for this FMCP to be fixed in consultation with Pollution Control Board, Assam. The cost of post closure air monitoring has been provided at para 8.10.

8.4 Waste Management

Disposal management of Buildings, Plants & Machineries

At present there is no equipment available. As per project authorities there is no such record available. The equipment winding system, ventilation etc. which were available at the time of closures might have been gainfully utilised in some other sister colliery. As regards Railway Siding, it was dismantled a long back. There is no structure present at the mine site. And NEC doesn't have the surface right of the UG working area. Disposal debris of the residential and non-residential buildings is not applicable for this FMCP.

The land use after FMCP for LEDO Colliery is given at Plate no. 6.2 and the breakup is given at table 8.3. The area has been measured by Arc GIS tool. Some unknown activities were reported not under the control of NEC and no occurrence of surface subsidence was also reported by the project officials. Hence, there impact on the surface land use due to UG unit was not assessed. Also, as per para 8.10.1 of MoC guideline 2020, subsidence monitoring for 5 years is proposed as an activity of this FMCP. DGPS survey of the extent of working is also proposed as an activity to FMCP. Subsidence monitoring reports may be prepared from CMPDI or other government agencies and be implemented by NEC.

At present about 0.05 Ha of LEDO is being worked by Tikak Extension OCP and about 1.26 Ha of land over UG working of LEDO Colliery will be utilised for proposed Tikak Extension OCP. Till it will be utilised for Tikak Extension OCP, fencing of that area is proposed as an activity if required. Fencing at other places including fencing round the part of proposed Tikak Extension OCP to restrict illegal entry is required over a length of about 1 km as shown in plate 6.2.

Table 8.3 : Breakup of landuse after FMCP				
Sl No.	Particulars	Area (Ha)		
		Forest	Non Forest	Total
A	Area utilised under Tikak Extn. OCP	0	1.26	1.26
B	Embankment	0.02	0.13	0.15
C	Garland Drain	0	0.15	0.15
D	Green Belt (along Nalla)		0.17	0.17
E	Water Body (Part of Ledo Pani Nala)	0.12	0.17	0.29
F	Others (not under control of NEC)	8.04	12.44	20.48
Gtand Total		8.18	14.32	22.5

About 0.29 Ha of mine working of LEDO colliery is under Ledo Pani Nala. To prevent the contaminated runoff water from the surface directly going to Ledo Pani Nala an embankment as an activity of FMCP is proposed for 270 m km of which 30 m will fall in forest area and 240 m will fall in non forest area. Stone pitching along the bank of Ledo Pani Nala is also proposed as an activity for about 270 m. A garland drain along the embankment and in the north eastern part of mine working is proposed as an another activity with a length of 600 m (Plate 6.2).

As informed by the project authorities no surface right is available with NEC over the mine working of LEDO Colliery. For making the activities proposed in FMCP, it may require obtaining surface right over the affected surface along with necessary help from state machineries relation to law & order. Financial provision and closure cost are given at para 8.10.

Disposal Management of Hazardous Material

These mines were closed a long back before 2009 and no hazardous material like explosives, chemical, lubricants etc. are available at present. However the surrender of licence of magazine which were used as per provisions of Explosive Act 1884 /Explosive Rules 2008 may be ensured by NEC.

8.5 Top Soil Management

This is an Underground colliery and discontinued long back after firedamp explosion in 2008 No top soil involved.

- 8.6 Management of Coal Rejects.** Mines discontinued long back after firedamp explosion in 2008 and no coal rejects are available as of now.
- 8.7 Restoration of Land used for Infrastructure.** Details furnished at para 8.1.2
- 8.8 Disposal of Mining Machinery** No equipment and mine machinery are available as of now.
- 8.9 Safety & Security**

Safety and Security activities

Two of opening were used in LEDO Colliery. Details of outlet are given at table 8.4. These outlets were sealed in the past. No visible mine entries are present. Non-CIL activities are going on over these areas which is beyond NEC's control as NEC do not have the surface right.

Table 8.4 : Details of Existing and discontd. /abandoned outlets					
	Outlet	Dia/ cross - Section (m)	Depth/Length (m)	Landing/ Connection	Usage details
A	Main Dip	W- 2.7m H- 2.4 m	210	Connection	Closed
B	Companion Dip	W- 2.7m H- 2.4 m	210	Connection	Closed

Because of the fire damp explosion on 04.11.2008, the inclined mouths were sealed off under imposition of Section 22 (3) of the Mines Act. 1952 by DGMS on 07.11.2008. Subsequently, a notice of discontinuance was submitted to DGMS. There is no structure present at the mine site. And NEC doesn't have the surface right of the UG working area. Proposed embankment along Ledo Pani nalla will serve as fencing to incline mouth. Incline mouth are required to be re-sealed owing to the fact of dozing by Non-CIL activities carried out by unknown entities. Flags/Boards with warning signals shall be posted at vulnerable places to avoid chances of accidents. Prior to handing over the project area to the State/Local authorities, it shall also be ensured that unstable areas, if any, are appropriately dealt with to render it safe and stable. There is a need of proper filling, levelling and sealing of sites near LEDO Colliery. There is no significant structure available or have been already dismantled (Table 4.9) near the mine as such parameters of MoC guidelines dtd. 29.05.20 or already completed before making this FMCP, has been omitted and no activity has been proposed.

There is no significant structure available or have been already dismantled (Table 8.5) near the mine as such parameters under of MoC guidelines dtd. 29.05.20 or already completed before making this FMCP, has been omitted and no activity has been proposed.

Table 8.5: Parameters left out	
Head	Parameters
Dismantling	Stowing bunker, UG equipment, pipeline to dump,
Safety and security	Pit, Dump, Air Shaft, borewell, Water body,
Technical and Biological Reclamation	Top Soil, OB Dump, External OB Dump, Agricultural land,
Post Closure Mgt.	nil
Others	Golden Handshake / Retrenchment benefits of OC & UG

Social security & Economic activities

LEDO colliery was abandoned in 2008. The employee of the LEDO colliery has been transferred to the nearby collieries/projects of NEC. Mining was done departmentally hence impact on indirect employment is minimal. Tikak Extension OCP is situated above underground working of LEDO Colliery and falls under common lease of 4 Sq. Mile Mining lease. Various social and economic activities are being carried out under CSR scheme of the company.

CSR Activities

Year wise expenditure incurred by NEC level is given at Annexure XIV. The community related activities taken up by NEC in last few years is also given at Annexure XIV. The various identified activities include - Skill training in plastic engineering, Promotion of preventive healthcare, Health Camp and developing sustainable livelihoods for local population through ecotourism, coaching to BPL student for nearby villagers, etc. These activities to continue at least for 3 years for these areas. Apart from the above-mentioned activities Entrepreneurship Development (Vocational/ Skill Development Training for sustainable income of affected people) program for 3 years and Medical camp on monthly basis within 5 kms of mine for 03 years are also proposed and included in this FMCP. The financial provisions along with closure cost is given at para 8.10.

Maintenance of Records & Submission of Return

Suitable manpower are to be provided for maintaining records of different activities and submission of return to different statutory bodies as per guidelines. Financial provision and closure cost are given at para 8.10.

Monitoring

Different activities under monitoring by CCO & MoC as per FMCP of Jeypore Dilli Colliery are given at table 8.6.

Table 8.6 : Activities under Monitoring		
Activity	Frequency	Nos. of Activity
Inspection by CCO	Frequency not mentioned.	1 or more
Compliance	Against each inspection of CCO	1 or more
Review by MoC	Quarterly	12

The various activities of maintenance of records, submission of return and facilitating monitoring by CCO & MoC can be achieved by re-deployment of few work force. As been informed that manpower at the time of mine closure have been gainfully utilized in different sister colliery. Financial provision and closure cost are given at para 8.10. As per para 2.10 of guideline, 2020, engagement of any Institute/ Organization/Agency like CMPDI etc. for third-party audit & report preparation of Final Mine Closure.

Thus all the summary of all activities are listed at table 8.7. The Financial provisions along with abandonment cost have been provided at para 8.10.

Table 8.7 : Summary of Activities Proposed.		
Sl. No	Particulars	Activities Proposed
1	Dismantling of Infrastructure & Disposal/ rehabilitation of Mining machinery	Dismantling & Rehabilitation of fan house near stone drift on surface.
2	Safety and Security	Barbed wire fencing (1 km) around the opening & over mine working.
		Flags/Boards with warning signals at vulnerable places
		Securing of 2 numbers of Adit (Incline) & fan house opening near surface.
		Garland drain (600 m)
		Embankment along Ledo Pani Nalla (270 m) & stone pitching
		Flags/Boards with warning signals at vulnerable places
3	Technical and Biological Reclamation of Mined out of land	Gates, view point, cemented roads etc.
		Landscaping and Plantation
		Plantation over embankment
		Filling of drains, settling tanks etc.& plantation over it
4	Post Closure management and supervision	Post Mining Water quality management
		DGPS survey of Extent of mining operation
		Subsidence monitoring for 5 years
		Manpower Cost and supervision
5	Others	Third-party audit & Report preparation
		Records keeping, monitoring
		Entrepreneurship development (vocational/skill development training for sustainable income of affected people for 3 years
		Continuation of other services like running of schools etc.
		Medical camps in and around villages falling within 5 km

8.10 Abandonment Cost and Financial Assurance

Abandonment & Financial Provisions

The financial provisions for the closure activities of final mine closure plan of LEDO Colliery is be made by NEC. Closure cost has been estimated based on the required activities as per para 8.10.1 of guidelines for preparation of the Mining Plan and Mine Closure Plan dated 29th May 2020.

Estimated Mine Closure Cost

As per Moc guideline 2020, activities wise estimated mine closure cost is tabulated at table 8.8 – table 8.12 and head wise cost to FMCP is given at table 8.13.

8.10.1 Abandonment Cost: Cost of Activities to be taken up for closure of the mine

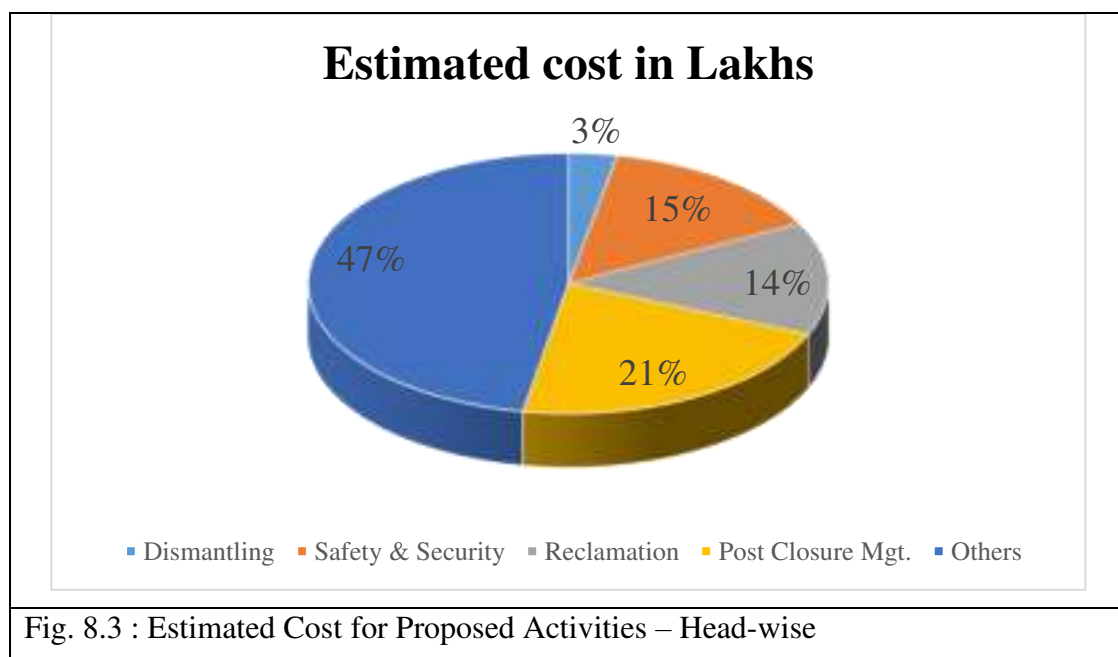
Abandonment cost

The abandonment cost for the various activities as per para 8.10.1 of guidelines dtd. 29.05.2020 and the activities listed at table 8.7 is given at table 8.8 to 8.12. The estimated cost for proposed activities has been compiled under 5 major head (Table 8.13). the estimated cost for proposed activities may vary at the time of implementation of FMCP and can be adjusted from other head.

It has been learnt that lion share of FMCP of 47% comes under head “Others” followed by Post Closure management and supervision (21%), Safety & Security (15%), Reclamation (14%) and “Dismantling & Rehabilitation” contributing to 3%.

The provision of an amount of Rs. 250 lakhs have been made in this final mine closure plan. As per para 4 of guidelines for the management of mines discontinued/abandoned/ closed before year 2009, dtd. 28.10.2022, Coal India Ltd. may consider to levy additional fee on per tonne basis to be paid by the coal consumers to meet the above mentioned cost of mine closure with approval of Board and may provide funding for LEDO Colliery.

The share of different heads can be seen at Fig. 8.3.



Derived Benefits

Check-on in the form of checklist for the derived benefits have been worked out and tabulated at table 8.14.

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.8 : Financial Provision (Dismantling)

Sl. No.	Head	Parameters	Details (approx.)			
			Unit	Quantity	Rate Rs/Unit (in Lakhs)	Amount "Rs. Lakhs" (including GST)
A	Dismantling of Infrastructure & Disposal/ rehabilitation of Mining machinery	A.1 Dismantling of workshop building, Agent/PO office, Survey office, Store, Time house, Colony.	LS			2.50
		A.2 Rehabilitation of the dismantled Facilities	LS			5.00
		A.3 Dismantling of pumps and Pipes/ other facilities	LS			0.00
		A.4 Dismantling of stowing bunker, provisioning of pumps for borewell pumping arrangement		Nil		0.00
		A.5 Dismantling of UG equipment		Nil		0.00
		A.6 Rearranging water pipeline for Agricultural land	LS			0.00
		A.7 Dismantling of Power lines	LS			0.00
SUB TOTAL (A)						7.50

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.9: Financial Provision (Safety & Security)

Table 8.9: Financial Provision (Safety & Security)							
Sl. No.	Head	Parameters		Details (approx.)			
				Unit	Quantity	Rate Rs/Unit (in Lakhs)	Amount "Rs. Lakhs" (including GST)
B	Safety and security	B.1	Barbed wire fencing around dump				0.00
		B.2	Barbed wire fencing around the opening	m	1000	0.011	11.00
		B.3	Barbed wire fencing with masonry pillars for above activity	m			0.00
		B.4	Concrete wall with Masonry pillars around the pit	LS			3.00
		B.5	Securing air shaft and installation of borewell pump	LS			0.00
		B.6	Concrete wall fencing around the water body	LS			0.00
		B.7	Boundary wall around the water body	LS			0.00
		B.8	Stabilisation (viz embankment benching, pitching etc) of side walls of the water body (Ledo Pani Nala)	LS			10.00
		B.9	Toe Wall around the dump	m			0.00
		B.10	Garland drain	LS			10.00
		B.11	Garland Drain around the dump	m			0.00
		B.12	Drainage Channel from Mine entries and Lining of earthen drain,	m			0.00
		B.13	Flags/Boards with warning signals at vulnerable places	LS			2.00
		SUB TOTAL (B)					

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.10: Financial Provision (Reclamation)

Table 8.10: Financial Provision (Reclamation)							
Sl. No.	Head	Parameters		Details (approx.)			
				Unit	Quantity	Rate Rs/Unit (in Lakhs)	Amount "Rs. Lakhs" (including GST)
C	Technical and Biological Reclamation of Mined out of land and OB Dump	C.1	Top Soil management	Ha			0.00
		C.2	OB Rehandling for backfilling	MM ³			0.00
		C.3	Terracing, blanketing with soil and vegetation of External OB Dump	Ha			0.00
		C.4	Peripheral road, gates, viewpoint, cemented steps on bank				10.00
		C.5	Expenditure on development of Agricultural land	Ha			0.00
		C.6	Landscaping and Plantation	Ha	0.5	10	5.00
		C.7	Filling of drains, settling tanks etc.& plantation over it	Ha	1	20	20.00
SUB TOTAL (C)							35.00

Table 8.11: Financial Provision (Post Closure)

Table 8.11: Financial Provision (Post Closure)							
Sl. No.	Head	Parameters		Details (approx.)			
				Unit	Quantity	Rate Rs/Unit (in Lakhs)	Amount "Rs. Lakhs" (including GST)
D	Post Closure management and supervision	D.1	Power Cost	LS			1.00
		D.2	Post Mining Water quality management	LS			3.00
		D.3	Post Mining Air quality management	LS			3.50
		D.4	Subsidence monitoring for 5 years	LS			10.00
		D.5	DGPS survey of Extent of mining operation	LS			6.00
		D.6	Waste Management	LS			0.00
		D.7	Manpower Cost and supervision	LS			30.00
SUB TOTAL (D)						53.50	

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.12: Financial Provision (others)

Table 8.12: Financial Provision (others)						
Sl. No.	Head	Parameters	Details (approx.)			
			Unit	Quantity	Rate Rs/Unit (in Lakhs)	Amount "Rs. Lakhs" (including GST)
E	Others	E.1 Golden Handshake / Retrenchment benefits to 100 employees of OC	LS			0.00
		E.2 Golden Handshake / Retrenchment benefits to 200 employees of UG	LS			0.00
		E.3 Onetime financial grant to societies / institutions /organisations which is dependent upon the project;	LS			0.00
		E.4 Provide jobs in other mines of the company	LS			0.00
		E.5 Continuation of other services like running of schools etc.	LS			50.00
		E.6 Emancipation from community facilities.	LS			0.00
		E.7 Third-party audit & Report preparation	LS			25.00
		E.8 Records keeping, monitoring	LS			10.00
		E.9 Entrepreneurship development (vocational/skill development training for sustainable income of affected people for 3 years		3 Years	2.5/Year	7.50
		E.10 Medical camps in and around 5 km	months	36	0.70 / camp	25.20
SUB TOTAL (E)					118.00	

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.13 : Estimated Cost for Proposed Activities – Head-wise			
Sl no.	Head	Estimated cost in Lakhs	% Share
1	Dismantling of Infrastructure & Disposal/ rehabilitation of Mining machinery	7.50	3 %
2	Safety and Security	36.00	15 %
3	Technical and Biological Reclamation of Mined out of land and OB Dump	35.00	14 %
4	Post Closure management and supervision	53.50	21 %
5	others	118.00	47 %
Total		250.00	100 %

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.14 : Check on Matrix									
Sl no.	Head	Activities	Status		Benefits				Remarks
			Already completed	Proposed	Environment	Social	Economic	Others	
1	Dismantling	Dismantling & Rehabilitation of service buildings & colony	✓				✓	✓	
2		Dismantling of pumps and Pipes/ other facilities	✓					✓	
3		Dismantling of UG equipment	✓					✓	
4		Dismantling of fan house near stone drift E on surface.	✓	✓					
5		Dismantling of Power lines	✓					✓	
6	Safety	Barbed wire fencing		✓	✓				
7		Barbed wire fencing with masonry pillars		✓				✓	
		Securing of Adit (Incline) & fan house	✓	✓					
		Garland drain & its lining		✓					
		Embankment		✓					
8		Lining of earthen drain		✓	✓				
9		Flags/Boards with warning signals at vulnerable places		✓		✓		✓	

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.14: Check on Matrix Contd...

Sl no.	Head	Activities	Status		Benefits				Remarks
			Already completed	Proposed	Environment	Social	Economic	Others	
11	Technical and Biological Reclamation	Paripheral road, gates, view point		✓		✓			Repurposing of land
12		Landscaping and Plantation		✓	✓		✓		ACA, CA , GC creation. Creating pool for Carbon Sequestration.
		Plantation over embankment		✓					
		Filling of drains, settling tanks etc.& plantation over it		✓					
15	Post Closure management and supervision	Power Cost	✓	✓	✓				
		Post Mining Water quality management							
16		Post Mining Air quality management	✓	✓	✓				
		DGPS survey of Extent of mining operation							
17		Subsidence monitoring for 5 years		✓				✓	
18		Waste Management and other activities		✓	✓				
19		Manpower Cost and supervision	✓	✓			✓		

Final Mine Closure Plan (FMCP) of LEDO Colliery, NEC, CIL, Margherita, Assam

Table 8.14: Check on Matrix contd...

Sl no.	Head	Activities	Status		Benefits				Remarks
			Already completed	Proposed	Environment	Social	Economic	Others	
21	Others	Golden Handshake / Retrenchment benefits to employees of UG	✓			✓			
22		Golden Handshake / Retrenchment benefits to employees of UG	✓			✓			
23		Onetime financial grant to societies / institutions / organizations which is dependent upon the project	✓			✓	✓		
24		Provide jobs in other mines of the company	✓				✓		
27		Third-party audit & Report preparation		✓				✓	
28		Records keeping, monitoring		✓				✓	
29		Entrepreneurship development	✓	✓		✓	✓		
30		Medical camps in and around 5 km	✓	✓		✓			

8.10.2 Financial Assurance : Amount to be deposited in Escrow account as a security against the mine activities to be carried out for the closure of the mine

Mines closed long back in 2009. Neither any progressive mine closure plan or final mine closure plan prepared earlier. As such no amount were deposited in escrow account. The final mine closure plan of LEDO has been prepared and abandonment cost has been provided at para 8.10.1.

8.11 Approval & Implementation of Final mine closure plan

Approval of Final mine closure plan

The final mine closure plan has to be approved by the company board. The mine owners shall ensure as per the mine closure plan approved by the Company Board. The coal mine owners are required to obtain the approval of the Final mine closure plan within one year from the date of issuance of these guidelines. In case final mine closure plan is not prepared by CMPDI, then it may be vetted by a third-party expert agency approved by central government, like Central Mine Planning and Design Institute Ltd. (CMPDI), National Environment Engineering Research Institute (NEERI), Indian Institute of Technology (IIT-ISM) etc. before submitting it to the company board. LEDO Collieries are unit at NEC and thus FMCP to be approved by CIL Board. This FMCP has been prepared by CMPDI.

Implementation of Final mine closure plan

After the approval of the Company Board, the owner of the mine will carry out mine closure activities as detailed in the Final mine closure plan falling which appropriate action would be taken against the mine owner. This section discusses the activities to be taken up as part of the final mine closure plan of LEDO Colliery. The activities selected as prelisted activities as para 8.10.1 of MoC Guideline dtd. 29.05.20.

8.12 Record, Return & Monitoring

Maintenance of Records & Submission of Return

The local communities are being provided many civic facilities, such as educational facilities, health facilities, and drinking water by the mine management. During the period of carrying-out mine closure activities as detailed in the FMCP, NEC shall maintain all

records of work done for closure of the mine and keep them available till the final closure certificate is obtained from the competent authority.

Monitoring

NEC shall provide all necessary facilities to CCO to monitor the FMCP activities. CCO to carry out inspection of Ledo Colliery for which this FMCP has been prepared and approved. CCO will check the records and return submitted by NEC against the work and will give written observation. NEC to submit compliance reports. NEC to submit quarterly report of work done towards closure to CCO. The Ministry of Coal will do a quarterly review of the progress of the closure.

Responsibility of the mine owner

It is the responsibility of the mine owner to ensure that the protective measures contained in the mine closure plan including reclamation and rehabilitation works have been carried out in accordance with the approved mine closure plan and final mine closure plan. The owner shall submit to the Coal Controller a yearly report before 1st July of every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plans. The Mine owner shall be required to obtain a mine closure certificate from Coal Controller to the effect the protective, reclamation, and rehabilitation work in accordance with the approved Mining plan covering final mine closure provisions/activities have been carried out by the mine owner for surrendering the reclaimed land to the State Government.

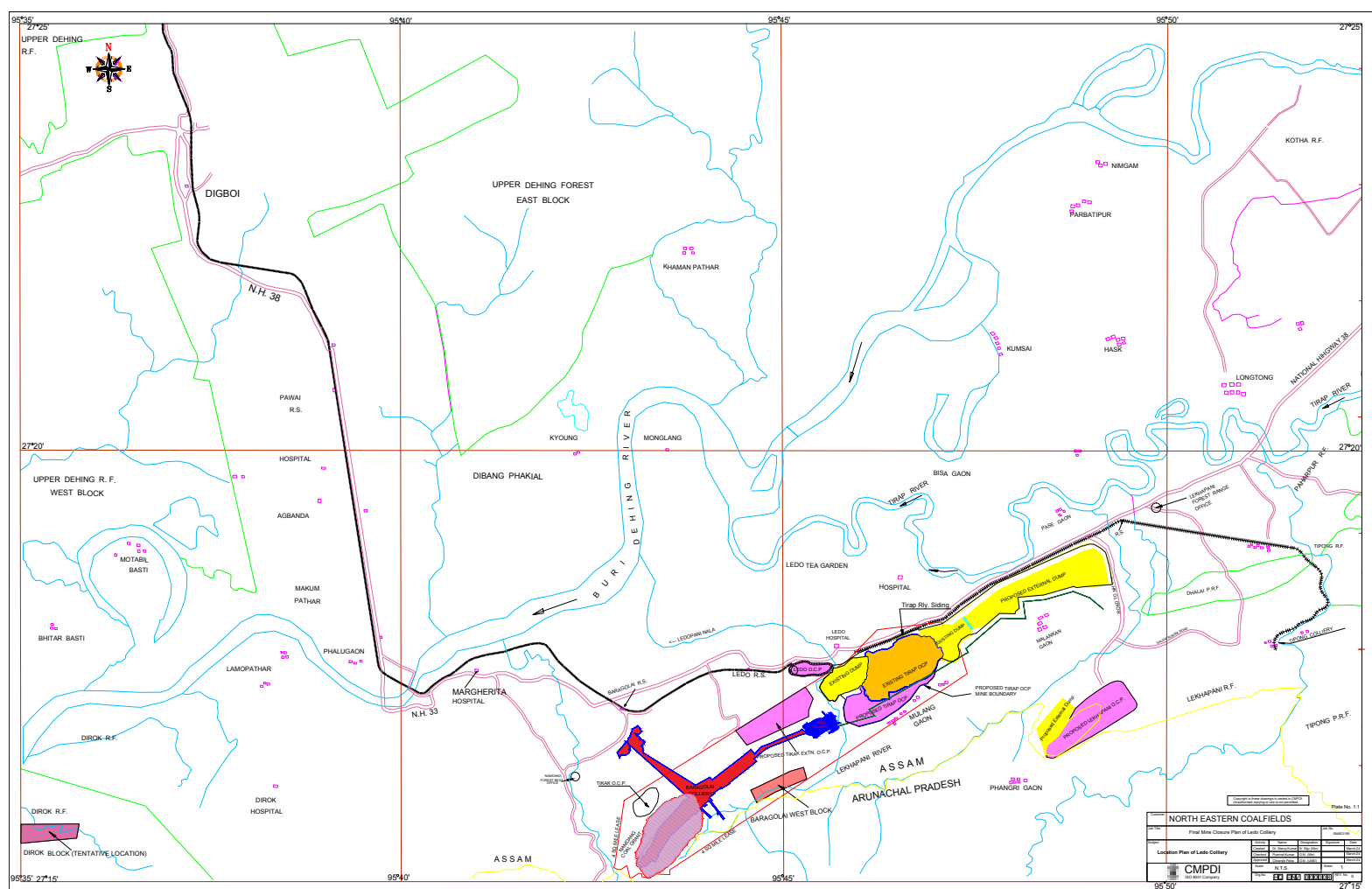
Others

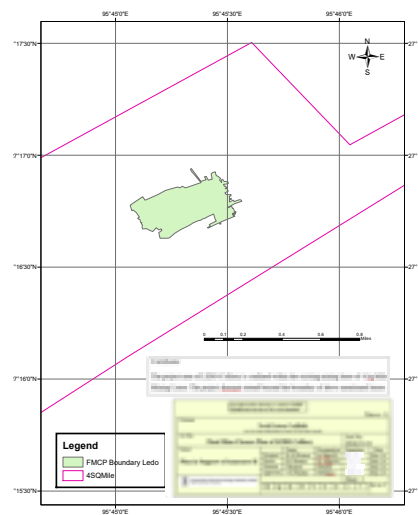
Final Mine Closure would be considered to be completed only after acceptance of the third-party audit report by the Coal Controller on the compliance of all provisions of Mine Closure Plan. Any Institute/ Organization/Agency as may be specified by the Government for this purpose may be engaged for Third Party audit to create a self-sustained ecosystem.

Proposed Final mine closure activities, as discussed in the preceding sections, have been developed based on a need-based study after field visit with mine Management to comply the guidelines provided in the revised mining plan and mine closure plan guidelines. The volume of work and rates of identified mine closure activities has been supplied by the

mine officials. This may vary at the time of execution of the activities depending upon the existing mine parameters at that point of time.

Nothing in present guidelines shall absolve the owner of the mine from fulfilling various statutory requirements under other applicable statutes and obligations. Further, guidelines are without any prejudice to any other relevant rules and regulations, such as those issued by the state government, Ministry of environment, forest & climate change, Ministry of Labour, and employment.







No. G 46F15
Scale 1:50,000

G 46F10 (25.0, 10.0)	G 46F14 (25.0, 14.0)	G 47A2 (25.0, 2.0)
G 46F11 (25.0, 11.0)	G 46F15 (25.0, 15.0)	G 47A3 (25.0, 3.0)
G 46F12 (25.0, 12.0)	G 46F16 (25.0, 16.0)	G 47A4 (25.0, 4.0)

1:50,000 VECTORIAL PROJECTOR

Ministry of Natural Resources and Environmental Conservation

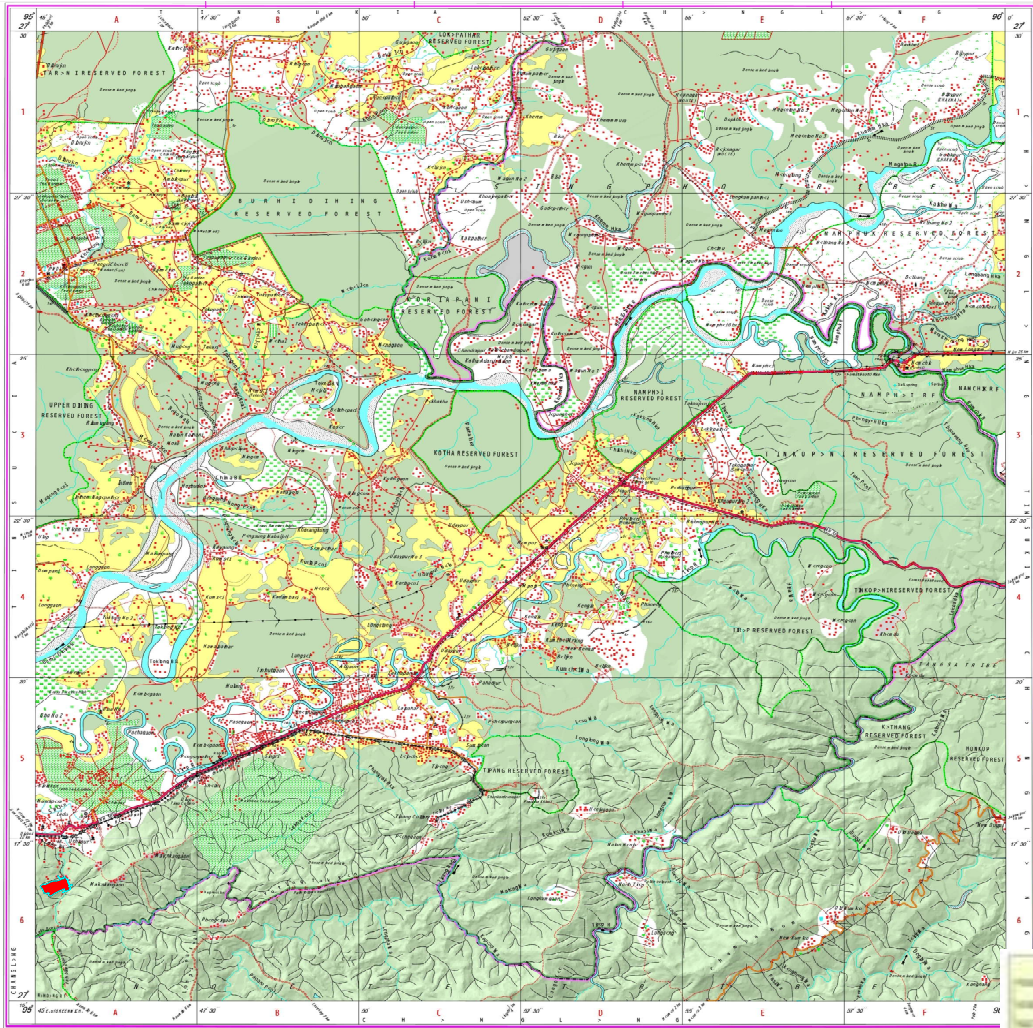
1:50,000 VECTORIAL PROJECTOR

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Forest	Green
Settlement	Yellow
Transportation	Red
Topography	Brown
Boundaries	Black
Vegetation	Light Green
Soil	Light Brown
Relief	Contour Lines
Water	Blue
Forest	Green
Settlement	Yellow
Transportation	Red
Topography	Brown
Boundaries	Black
Vegetation	Light Green
Soil	Light Brown
Relief	Contour Lines

1:50,000 VECTORIAL PROJECTOR

1:50,000 VECTORIAL PROJECTOR

1:50,000 VECTORIAL PROJECTOR

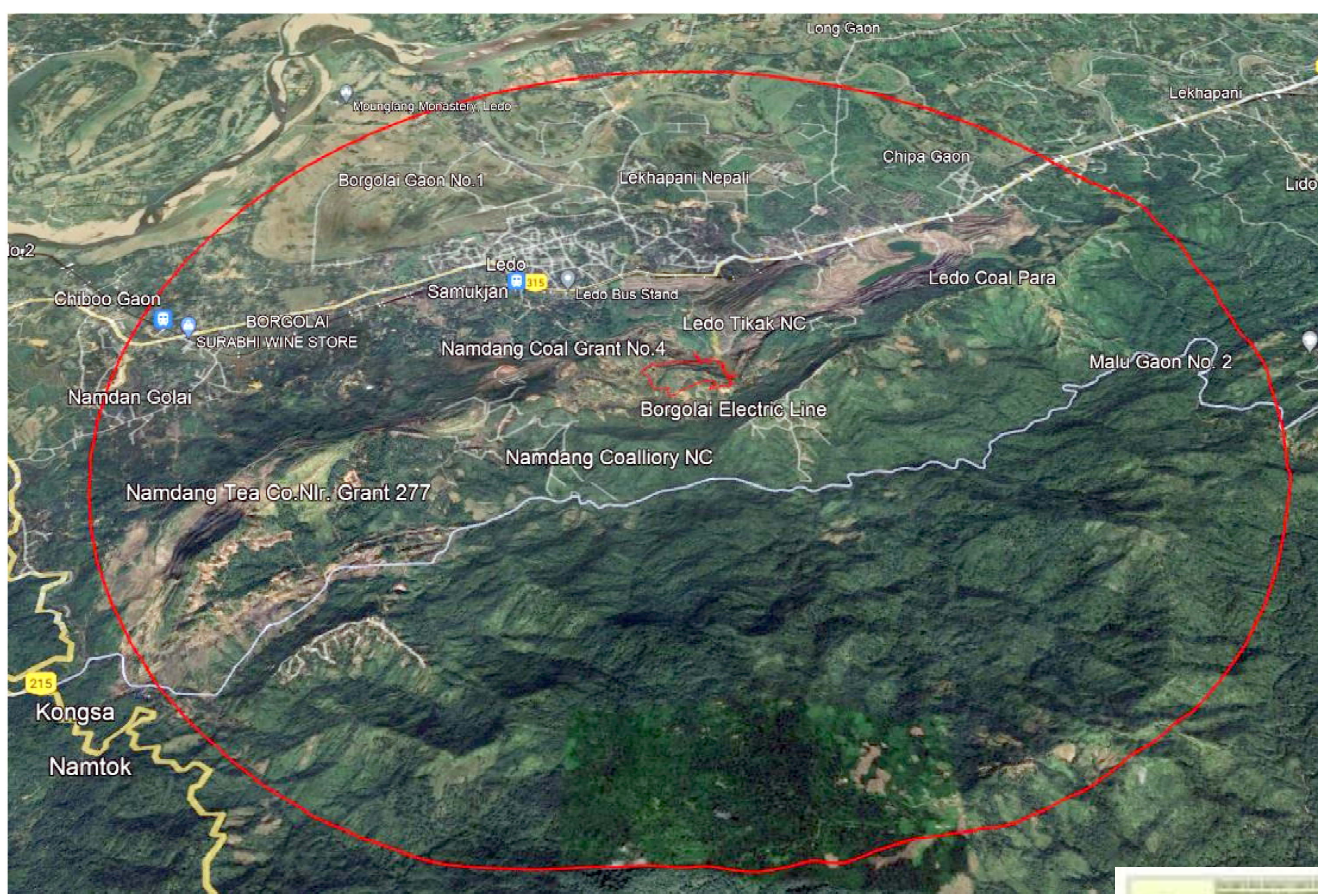


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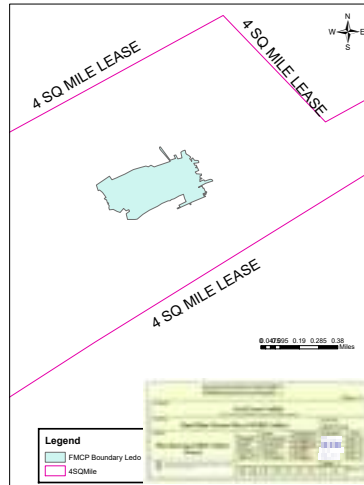
Leasehold Ledo
G46F15_83M15_page-0001.jpg
RGB

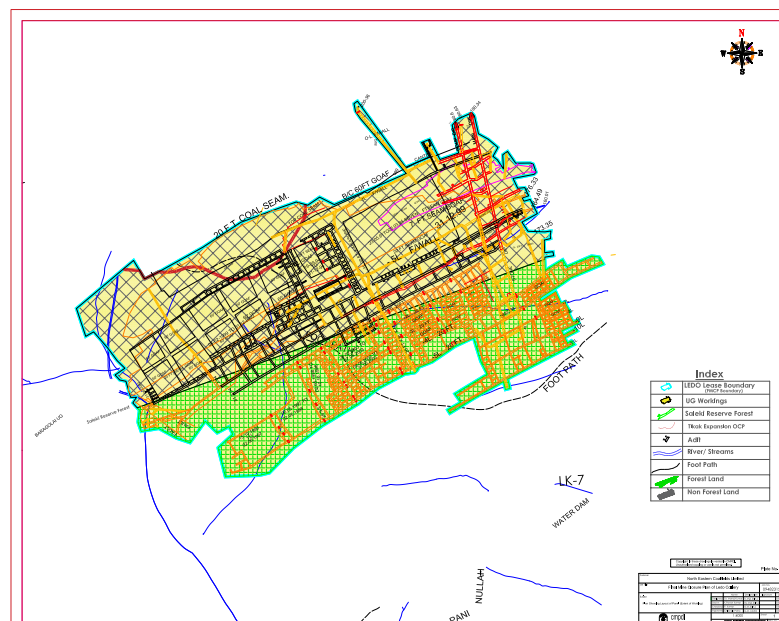
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Green: Band_2
Blue: Band_3

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File Description	Topographic Map of a region in Myanmar
File Keywords	Topographic Map, Myanmar, G46F15_83M15_page-0001.jpg
File Comments	



The image shows a sample of a 'New Mexico Department of Transportation' form. The title is 'Road Work Closure Plan of 15000 Gallons'. The form includes fields for 'Project Name', 'Location', 'Date', and 'Time'. It also has a section for 'Planned Work' with a table for 'Work Item', 'Start Time', 'End Time', and 'Duration'. The 'Planned Work' section is currently empty. There is a 'Total Gallons' field at the bottom right, which is currently empty. The form is dated '10/1/2000'.





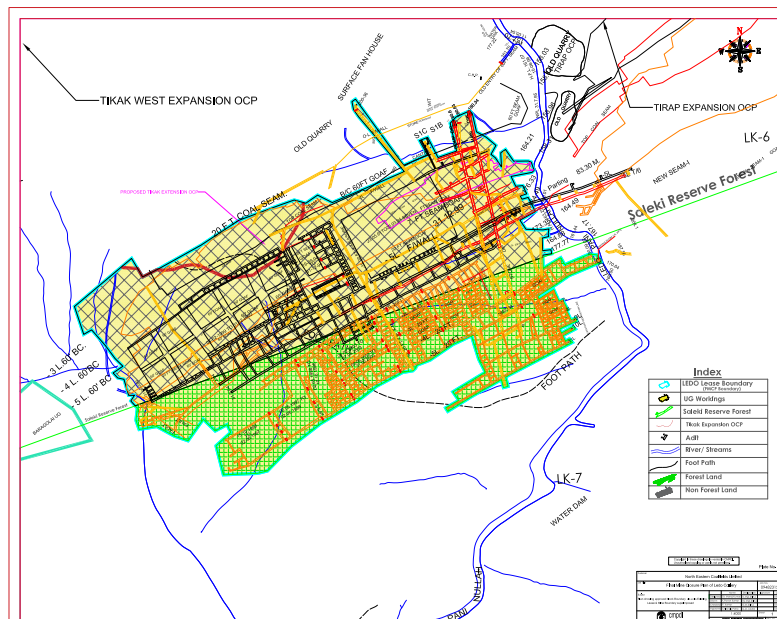
Land Use at the time of Mine Closure			
	Forest	Non Forest	Total
Ledo Nala Over UG Working	0.12	0.17	0.29
Non CIL Activity	2.93	7.47	10.40
Present Working of Tikak Extn OCP	0.00	0.05	0.05
Other UG Working	5.13	6.63	11.76
Total	8.18	14.32	22.50



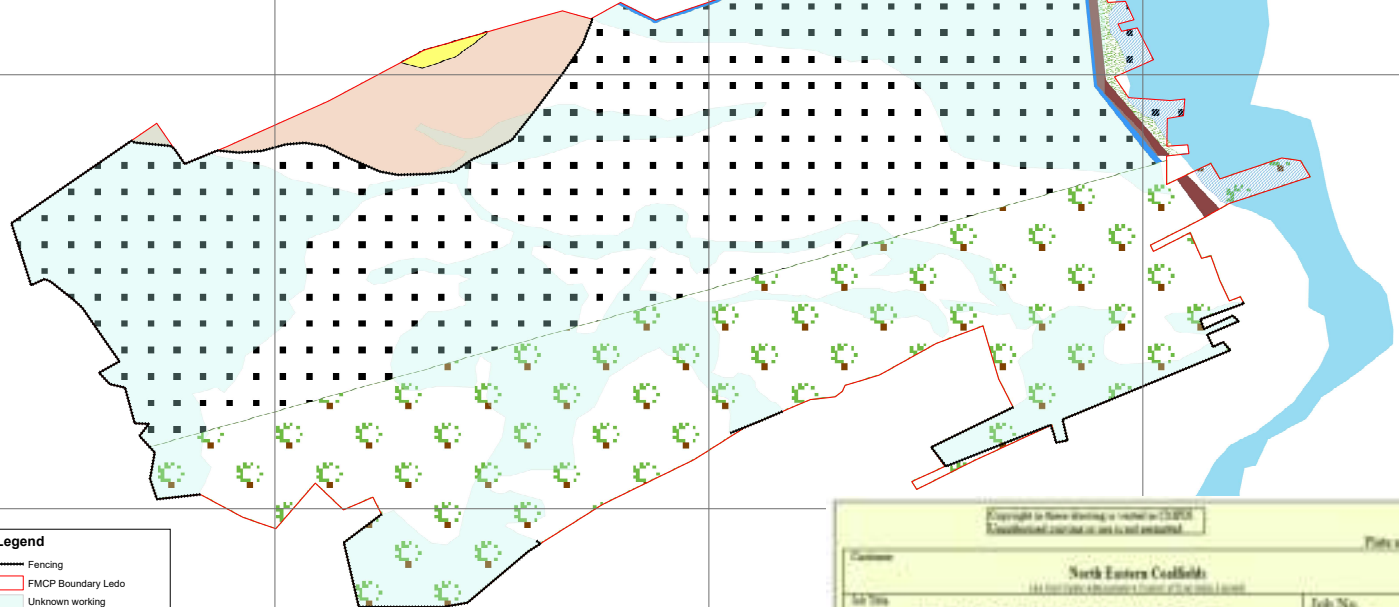
- Legend**
- Adit_F
 - Footpath
 - FMCP Boundary Ledo
 - ▨ ledonla_overWorking
 - maindip_companion dip
 - Presentworking_Tikak_Extn
 - Ledo Non forest
 - Ledo_Forest
 - ledo nala

0 35 70 140 210 280 Meters

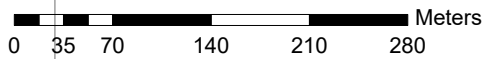
Copyright & Mine Planning is vested in TSPMS Unauthorized use or reuse is not permitted.					Plan no. 1.1
Customer: North Eastern Coalfields (An Indian Government Undertaking of Coal and Lignite)					
Job Title: Final Mine Closure Plan of LEBO Colliery			Job No: 0948/21150		
Subject: Land Use Plan showing Land Type (Present Land Use)	Designed: Dr. M. Kumar	Designation: Asst. Min. (G)	Signature:	Date: Mar-18	
	Drawn: K. P. Kumar	Designation: Asst. Min. (G)	Signature:	Date: Mar-18	
	Checked: P. Kumar	Designation: GM (G)	Signature:	Date: Mar-18	
	Approved: V. R. Pandey	Designation: GM (G)	Signature:	Date: Mar-18	
Scale: 1:1000			Sheet: 1		
HQ ENVO 00213			Rev no: 1		



Land Use after Final Mine Closure			
	Forest	Non Forest	Total
Area utilised by Tikak Extrn. OCP	0.00	1.26	1.26
Embankment	0.02	0.13	0.15
Garland Drain	0.00	0.15	0.15
Green Belt (along Nalla)	0.00	0.17	0.17
Water Body (Part of Ledo Panu Nala)	0.12	0.17	0.29
Others (not under control of NEC)	8.04	12.44	20.48
Total	8.18	14.32	22.5



Legend	
	Fencing
	FMCP Boundary Ledo
	Unknown working
	Garland Drain
	Embankment_F
	Iedonla_overWorking
	Proposed Tikak Extrn OCP_Part
	Plantation along nalla
	Ledo Non forest
	Ledo_Forest
	Iedo nalla



Copyright in these drawings is vested in CSMPCL. Classification and/or use are to not be restricted.						Plan no. S.1	
Customer: South Eastern Coalfields							
Job Title: Final Mine Closure Plan of LEDO Colliery							
Subject: Plan Showing Post Mining Land Use Plan				Job No. 094872159			
Designed	Name	Designation	Signature	Date			
Drawn	Dr. M. Kumar	Dr. M. Kumar		May-24			
Checked	K.P. Kumar	Dr. M. Kumar		May-24			
Approved	V.K. Prasad	GM, SECCL		May-24			
Scale: 1:1000				Sheet: 1			
H I Q E N V I O O 2 4				Plan no. 1			

**GOVERNMENT OF ASSAM
MINES AND MINERALS DEPARTMENT**

ECF No.230562/92

From : Shri Arpan Kumar Saikia, ACS
Addl. Secretary to the Government of Assam,
Mines and Minerals Department,
Dispur, Guwahati -6.

To : The General Manager,
North Eastern Coalfields,
Coal India Limited
P.O. - Margherita
Dist:- Tinsukia, Assam- 786602

Sub : Extension of Mining Leases Validity of 4.48 Sq Mile Mining Lease
(Lekhapani-Tipongpani Mining Lease), 4 Sq Mile Mining Lease (Ledo-
Baragolai Mining Lease) and 2.38 Sq. Km Tirap Coal Grant.

Ref : Your letter No-GM/NEC/22/174/199 dated 11-11-2022

Sir,

In inviting a reference to the letter under reference above, I am directed to convey the approval of the Govt. of Assam in Mines & Minerals Department to the proposal for extension of validity of the following Mining Leases -

1. 4.48 Sq Mile Mining Lease (Lekhapani-Tipongpani Mining Lease),
2. 4 Sq Mile Mining Lease (Ledo- Baragolai Mining Lease)
3. 2.38 Sq. Km Tirap Coal Grant

for a period up to 31st March 2030 as per rule 24c of the Mineral Concession (Amendment) Rules, 2021.

This is for your information and necessary action.

Further, I am to request you to acknowledge this communication for better maintenance of Office record.

Yours faithfully,

**Signed by Arpan Kumar
Saikia**

Date: 03-12-2022 13:24:30

Addl. Secretary to the Govt. of Assam
Mines & Minerals Department,
Dispur, Guwahati-6.

MINES/127/2022-MINES/MINERALS-Mines and Minerals

959097/2022/MINES

1/81546/2022

Memo.No. ECF No.230562/92-A

Dated Dispur, the 3rd December, 2022

Copy to :-

1. The Joint Secretary to the Govt. of India, Ministry of Coal , Shastri Bhawan, Dr. Rajendra Prasad Road, New Delhi-110001 for information.
2. The Director, Geology & Mining, Assam, Kahilipara, Guwahati-19 for information.
3. The Deputy Commissioner, Tinsukia District.
4. The Superintendent of Police, Tinsukia District.

E-signed

Addl. Secretary to the Govt. of Assam,
Mines & Minerals Department,
Dispur, Guwahati-6.

Annexure II**Certificate of Qualified Person (QP)**

This is to certify that this Final mine closure Plan has been prepared for Ledo Colliery as per "Guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining plan for the coal and lignite blocks" issued by MoC, GoI, vide F.No. MPS/02/2022-MPS Date: 28th Oct'2022 and taking into considerations of "Guidelines for Management of Mines discontinued/ abandoned/ Closed before the year 2009" issued by MoC vide letter no: F. No-34011/28/2019-CPAM Dt. 29.05.2022.

Shambhu Sharan
29/05/2024
SL No. 145 (ME)
[SHAMBHU SHARAN]
GM(M), UM, Divison
CAMPD, ME.

Annexure III

Approval of the Company Board

LEDO Colliery falls in NEC, an unit under administrative control of CIL. FMCP will be placed in CIL Board for its approval.

Annexure IV

Copy of Earlier Approval of Mining Plan

LEDO Colliery falls in NEC, an unit under administrative control of CIL. No mining plan has been prepared earlier.

**Plan / chart showing schedule of Implementation of Mine closure activities
(progressive and final closure) with duration of important activities**

LEDO Colliery falls in NEC, an unit under administrative control of CIL.
Implementation schedule for final mine closure is as below:

Sl.No	Activity	Time Frame	Remarks	Post Closure Phase		
				PC1	PC2	PC3
A	Dismantling of Infrastructure & Disposal/ rehabilitation of Mining machinery					
A1	Dismantling of workshop building, Agent/PO office, Survey office, Store, Time house, Colony.	2 years				
A2	Rehabilitation of the dismantled Facilities	1 year				
B	Safety and security					
B1	Barbed wire fencing around the opening & over mine working to be transferred to sister colliery for opencast working.	1 year				
B2	Garland drain	1 year				
B3	Stabilisation (viz embankment benching, pitching etc) of side walls of the water body (Ledo Pani Nala)	2 years				
B4	Flags/Boards with warning signals at vulnerable places	1 year				
C	Technical and Biological Reclamation of Mined out of land and OB Dump					
C1	Peripheral road, gates, view point, cemented steps on bank.	1 year				
C2	Landscaping and Plantation	2 years				
C3	Filling of drains, settling tanks etc.& plantation over it	2 years				
D	Post Closure Management and Supervision					
D1	Power Cost	3 years				
D2	Post Mining Water quality management	3 years				
D3	Post Mining Air quality management	3 years				
D4	Subsidence monitoring for 5 years	3 years				
D5	DGPS survey of Extent of mining operation	1 year				

Sl.No	Activity	Time Frame	Remarks	Post Closure Phase		
				PC1	PC2	PC3
D6	Waste Management (for maintaining Eco park/ETP/AMD plant etc.)	3 years				
D7	Manpower Cost and supervision	3 years				
E	Others					
E1	Continuation of other services like running of schools etc.	3 years				
E2	Third-party audit & Report preparation	3 years				
E3	Records keeping, monitoring	3 years				
E4	Entrepreneurship development (vocational/skill development training for sustainable income of affected people for 3 years)	3 years				
E5	Medical camps in and around 5 km	3 years				

Annexure VI

Application Fee

LED0 Colliery falls in NEC, an unit under administrative control of CIL. No application fee is required for approval of MP/FMCP.

Annexure VII**Expert Review Report**

The Final Mine closure plan of Ledo Colliery (UG Mine) has been prepared as per as per “Guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining plan for the coal and lignite blocks” issued by MoC, GoI, vide F.No. MPS/02/2022-MPS Date: 28th Oct’2022 and taking into considerations of “Guidelines for Management of Mines discontinued/ abandoned/ Closed before the year 2009” issued by MoC vide letter no: F. No-34011/28/2019-CPAM Dt. 29.05.2022. NEC vide work order dtd. 17.10.2023 has requested CMPDI to prepare FMCP. NEC to obtain approval from CIL Boad and has to obtain certificate from CCO after completion of activities of FMCP.

MPS/2/2022-MPS
Government of India
Ministry of Coal
(MPS Section)

Room No. 622-A, Shastri Bhawan,
New Delhi, dated 28th October, 2022

Sub: Guidelines for the Management of Mines discontinued/ abandoned/ closed before the year 2009.

A large number of coal mines were discontinued/abandoned/closed before 2009 when 1st mine closure guidelines were issued by the Ministry of Coal. However, these guidelines were silent about them. There is a need to close these mines scientifically in such a manner that they provide benefit to the community, prevent illegal mining, ensure the safety and repurposing of the mined-out land. Therefore, guidelines are being issued to provide guidance to all coal companies (including lignite) having discontinued/ abandoned/ closed mines after the nationalization of coal mines till 27th August 2009 (date of issuance of first coal mines closure guidelines). Copy of the same is enclosed. The guidelines intend to only provide an overall framework for the closure of mines and the details of final implementation plans are to be finalized and approved by the respective Company Boards. The overall goal of the guidelines is to restore the mined-out land as far as possible to its pre-mining stage, bring ecological balance and purposefully reutilise the land for the benefit of the country.

2. It is requested to take further necessary action in compliance of these guidelines and submit ATR to this Ministry on Quarterly basis.

This issues with the approval of the Competent Authority.

Encl: As above


(Hitlar Singh)

Under Secretary to the Govt. of India
E-mail: hitlar.singh85@nic.in

To,

1. The Chairman, CIL, Kolkata
2. CMDs of all Subsidiaries of CIL
3. CMD, SCCL
4. CMD, NLCIL

Copy to:

1. The Secretary, MoEF&CC, New Delhi
2. The Director General, DGMS, Dhanbad
3. The Coal Controller, New Delhi
4. NIC - to upload on portal of MoC
5. All sections of this Ministry

F. No. MPS/02/2022-MPS
Government of India
Ministry of Coal
[MPS Section]

Shastri Bhawan, New Delhi
Dated: 28th October, 2022

OFFICE MEMORANDUM

Subject: Guidelines for the Management of Mines discontinued/abandoned/closed before the year 2009

A large number of coal mines were discontinued/abandoned/closed before 2009 when 1st mine closure guidelines were issued by the Ministry of Coal. However, these guidelines were silent about them. There is a need to close these mines scientifically in such a manner that they provide benefit to the community, prevent illegal mining, ensure the safety and repurposing of the mined-out land. Therefore, the following guidelines are being issued to provide guidance to all coal companies (including lignite) having discontinued/ abandoned/ closed mines after the nationalization of coal mines till 27th August 2009 (date of issuance of first coal mines closure guidelines). The guidelines intend to only provide an overall framework for the closure of mines and the details of final implementation plans are to be finalized and approved by the respective Company Boards. The overall goal of the guidelines is to restore the mined-out land as far as possible to its pre-mining stage, bring ecological balance and purposefully reutilise the land for the benefit of the country.

1. Categorisation of non-operational mines -

In continuation to various circulars issued by DGMS and industry-accepted norms, the following categories will now be defined as specified below -

- 1.1. Discontinued Mines:** Discontinued mines mean such working in a mine as have been discontinued for any reason and are inaccessible or rendered inaccessible but are likely to be worked again. These mines can be re-opened as per provisions of CMR (Reg.-6) and Colliery Control Amendment Rule-2021 (Rule no.9 (ii)).
- 1.2. Abandoned Mines:** Abandoned mines mean such working as have been abandoned with no intention of working in the future for which the owner of the mine has already submitted a notice to the Chief Inspector of Mines, Regional Inspector, and District Magistrate about abandonment in the prescribed format (Reg. no. 5 of CMR, 2017).
- 1.3. Closed Mines:** Closed mines are those mines for which the owner/agent/manager has submitted notice of closure in the prescribed format (under CMR-2017, Reg.-5) to the Chief Inspector of Mines, Regional Inspector and District Magistrate and has also obtained the mine closure certificate from Coal Controller (As per mine closure guidelines-2020).

However, prior to the implementation of Mine Closure guidelines-2009, closed mines may be considered as those mines for which the owner of the mine has already submitted a notice to the Chief Inspector of Mines, Regional Inspector and District Magistrate about the closure in the prescribed format (Form-1 of Regulation – 6 of CMR-1957), and the extractable reserve as per mining plan has been exhausted.

2. **Steps to be taken by mine owners to manage the non-operational mines -**
 - 2.1. **Discontinued/Abandoned mines -**
 - 2.1.1. **Mine re-operationalization:** The owner of the mine shall explore possibilities to operationalize the concerned mines through various models, additional exploration if required and prepare a detailed action plan after due consultation ensuring transparency and objectivity. EC if required may be obtained following the guidelines of MoEFCC for reopening the mines.
 - 2.1.2. **Approval of the re-operationalization plan:** The re-operationalization plan must be approved by the company board.
 - 2.1.3. **Modification in Mining Plan:** Concerned Coal Company will modify the mining plan within 1 year of coming into force these guidelines if required.
 - 2.1.4. **Temporary mine closure plan:** If the mine cannot be operationalized after initiatives taken under Para 2.1.1, then the owner of the mine shall prepare a temporary mine closure plan. A temporary mine closure plan would contain the mine closure activities such as protective works, safety measures, and any other required activity as per Para 8.10.1. of the Guidelines of preparation of Mining Plan & Mine Closure Plan dated 29th May 2020, in such a manner that if technology permits in the future, mining can be restarted. Mine owners should include short-term economic activities in the temporary closure plan without damaging the seams/reserves available.
 - 2.1.5. **Approval of temporary mine closure plan:** The temporary closure plan must be approved by the company board. Also, the plan must include details of efforts undertaken to operationalize mine as per Para 2.1.1. The coal mine owners are required to obtain the approval for Temporary mine closure plan within one year from the date of issuance of these guidelines. In case temporary mine closure plan is not prepared by CMPDI, then it may be vetted by a third-party expert agency approved by the central government, like Central Mine Planning and Design Institute Ltd. (CMPDI), National Environment Engineering Research Institute (NEERI), Indian Institute of Technology (IIT-ISM) etc. before submitting it to the Company Board.
 - 2.1.6. **Implementation of temporary closure plan:** After the approval of the mine closure plan, the owner of mine will carry out mine closure activities as detailed in the temporary mine closure plan within 3 years, failing which appropriate action would be taken against the mine owner.
 - 2.1.7. The Government may at any time before the closure of the mine, require certain activities to be included in the mine closure plans, which it may consider necessary for the safety and conservation of the environment or in compliance with any modification/ amendment in the relevant legislation.
 - 2.2. **Closed Mines -**
 - 2.2.1. **Final mine closure plan:** In the case of closed mines, the owner of the concerned mine shall prepare a Final mine closure plan. The Final Mine closure plan should be prepared as per the Guidelines for preparing the Mining Plan & Mine Closure plan dated 29th May 2020. However, only the mine closure part is to be prepared in case of these mines.

- 2.2.2. Approval of Final mine closure plan:** The Final mine closure plan has to be approved by the company board. The mine owners shall ensure mine closure as per the mine closure plan approved by the Company Board. The coal mine owners are required to obtain the approval of the Final mine closure plan within one year from the date of issuance of these guidelines. In case final mine closure plan is not prepared by CMPDI, then it may be vetted by a third-party expert agency approved by the central government, like Central Mine Planning and Design Institute Ltd. (CMPDI), National Environment Engineering Research Institute (NEERI), Indian Institute of Technology (IIT-ISM) etc. before submitting it to the Company Board.
- 2.2.3. Implementation of Final mine closure plan:** After the approval of the Company Board, the owner of mine will carry out mine closure activities as detailed in the Final mine closure plan within 5 years failing which appropriate action would be taken against the mine owner.
- 2.2.4. Alternate use of reclaimed Land:** After the closure of the mine, on the reclaimed land various project-specific economic repurposing activities can be carried out or reclaimed land to be leased out as per Ministry of Coal policy guidelines dated 22nd April 2022 for use of land acquired under the Coal Bearing Area (Acquisition & Development) Act, 1957.
- 2.2.5.** The Government may at any time before the closure of the mine require certain activities to be included in the mine closure plans, which it may consider necessary for the safety and conservation of the environment or in compliance with any modification/ amendment in the relevant legislation.
- 3. Social support measures -**
- 3.1.** The air, water, and soil quality of the region surrounding 5 km of the discontinued/ abandoned/ closed mines should be monitored as per MoEFCC/CPCB defined acceptable standards and it is mandated to ensure that the closure plan must include all such activities needed to control the pollution from the concerned mines.
- 3.2.** The health camps must be organized on monthly basis to monitor the health of the population residing within 5 km of the discontinued/ abandoned/ closed mines with a special focus on respiratory diseases such as silicosis etc. The identified patients must be linked to local health administration for further treatment if required.
- 3.3.** A careful consideration is to be given to provide reskilling to the willing workers as per their need for their gainful employment.

4. Financial provision-

The financial provision for the closure activities of both temporary and final mine closure plans of the mines is to be made by the respective Coal Companies. Closure cost is to be estimated based on the required activities as per para 8.10.1 of guidelines for the preparation of the Mining Plan and Mine Closure Plan dated 29th May 2020 for implementing the approved closure plan. However, Coal India Ltd. may consider to levy additional fee on per tonne basis to be paid by the coal consumers to meet the cost of mine closure with the approval of Board and to provide funding for those subsidiaries which are not able to fund the closure of these mines.

5. Exceptions -

- 5.1. In certain cases, there are more than one mine below the same surface land. One mine may have been closed due to exhaustion of resources but other mines are running. In such cases, final mine closure activities related to surface land may have to be deferred till the closing of all the mines.
- 5.2. A mine can be planned and worked covering only a part of a Coal Block. The present mine can be extended to cover the remaining part of the Coal Block in the future. Hence, Final Mine Closure activities for the present mine area may be deferred.
- 5.3. However, progressive closure activities are to be carried out as per Mine closure guidelines 2020 for both the above cases.

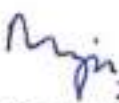
6. Maintenance of records & submission of returns -

The owner shall maintain all the records of works done for the closure of the mine and keep them available till the final closure certificate is obtained from the competent authority. DGPS survey of Abandoned/Discontinued mines linked to the national grid to be kept available.

7. Monitoring -

CCO to carry out the inspection of all the mines, check the records maintained by the owner of the work done and give written observation. Concerned mine authorities should submit compliance to the observations made. Also, Coal companies are to submit a quarterly report of work done towards closure to CCO. The Ministry of Coal will do a quarterly review of the progress of the closure of mines.

8. Nothing in present guidelines shall absolve the owner of the mine from fulfilling various statutory requirements under other applicable statutes and obligations. Further, guidelines are without any prejudice to any other relevant rules and regulations, such as those issued by the state government, Ministry of environment, forest & climate change, Ministry of Labour, and employment.


28/10/22
(M. Nagaraju)

Additional Secretary to the Government of India

To,

Mine Owners

Copy to:

1. Secretary, MoEF&CC
2. DG, DGMS
3. Coal Controller

नार्थईस्टर्नकोलफील्ड्स

कोलइण्डियालिमिटेड

(महारात्नाकम्पनी)

महाप्रबन्धककाकार्यालय

मार्घेरिता -786181 (असम)

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इपिबिएक्स -03751-220329 /2203

फैक्स - 03751 -220354

कपरेतआइडीन.L23109WB1973GO1028844

ई. मेल-gm.nec.cil@coalindia.in

**NORTH EASTERN COALFIELDS**

Coal India Limited

(A Maharatna PSU under MoC)

Office of the General Manager

Margherita-786181 (ASSAM)

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Fax- (03751) - 220354

Corporate ID No. L23109WB1973GO1028844

E-mail: gm.nec.cil@coalindia.in

Letter No. NEC/GM/WO/ 2023/GM (RD)/168

Date: 17.10.2023

To,
The General Manager (Business Development),
C.M.P.D.I. Ltd,
Gondawana Place, Kanke Road,
Ranchi - 834031,
Jharkhand

Subject: - Workorder for "Preparation of final Mine Closure Plan for Jeypore Dilli Colliery (UG mine), Baragolai Colliery (UG mine) and Ledo Colliery of North Eastern Coalfields, Coal India Limited, Margherita, Assam"

Ref.No.: 1. letter No. CMPDI/ BD/ (Environment) Offer/ 2023/ E-1077286/ 1190000263/ I-17847 dated 08/06/2023,

Sir,

Your offer for the job of "Preparation of final Mine Closure Plan for Jeypore Dilli Colliery (UG mine), Baragolai Colliery (UG mine) and Ledo Colliery of North Eastern Coalfields, Coal India Limited, Margherita, Assam" has been approved by the Competent Authority. The total cost of the job is Rs. 1,46,13,120/- (Rupees One Crore Forty Six Lakh Thirteen Thousand One Hundred Twenty) only including GST @18%.

The break up of calculation is given below: -

SI No.	Job Description	Amount (In Rs.)
1	Preparation of final Mine Closure Plan for Jeypore Dilli Colliery (UG mine) of North Eastern Coalfields, Coal India Limited, Margherita, Assam	41,28,000/-
2	Preparation of final Mine Closure Plan for Baragolai Colliery (UG mine) of North Eastern Coalfields, Coal India Limited, Margherita, Assam	41,28,000/-
3	Preparation of final Mine Closure Plan for Ledo Colliery of North Eastern Coalfields, Coal India Limited, Margherita, Assam	41,28,000/-

Total amount	1,23,84,000/-
GST @18%	22,29,120/-
Total Amount with GST	1,46,13,120/-

You are hereby requested to complete the assignment and submit the final Mine Closure Plan of Jeypore Dilli Colliery (UG mine), Baragolai Colliery (UG mine) and Ledo Colliery of North Eastern Coalfields along with soft copies for further necessary action.

Thanking you,

Encl: As stated.

Your Sincerely,


17/10/2023

General Manager
North Eastern Coalfields,
Margherita, Assam

Copy to : 1. TS to Director (Tech), CIL, Kolkata – for kind information.
2. General Manager, Environment Division, CIL, Kolkata – for kind information.

FIRST SCHEDULEFORM - I

(See Regulations - 3,6,7,8)

Notice of opening, closing or change of Mine.

From : Agent, Ledo Colliery, P.O.- Ledo, Dist.- Tinsukia, Assam, CIL, NECF.

To,

1. The Director General of Mines Safety, Dhanbad.
2. The Dy. Director General of Mines Safety, Sitarampur.
3. The Director of Mines Safety, Sitarampur Region-IV.
4. The Dy. Director of Mines Safety, Digbel, Sub-region, Digbel.

Sir,

I have to furnish the following particulars in respect of Ledo Colliery at Ledo Mine of C.I.L.(NECF), Margherita, Assam, Director(Tech) CIL, Owner.

1. In case of change of Name of Mine :
Old name of Mine Date of change ... N/A.....
2. (a) Situation of the Mine : Village- Ledo, Police Station: Margherita,
Sub-Division (Taluk) Margherita, Dist.: Tinsukia, State : Assam.
(b) In case of New Mine, particulars of situation of Mine,
Post Office N/A, Telegraph Office : N/A,
Railway Station : N/A, Rest House : N/A,
(Give distances therefrom)
Means of Travelling : N/A
3. (a) Name and Postal address of : Present
i) Owner : Director Technical, CIL, Kolkata.
ii) Managing Agent, if any : N/A.
iii) Agent, if any : Shri S. M. Jha.
iv) Manager : Shri K. P. Sharma.
(b) In case of change, date of : N/A,
change.
4. (a) Name & qualification etc. of : N/A,
Manager/Under Manager/Safety
Officer/Ventilation Officer/
Engineer/Surveyor whose
appointment is terminated
who is appointed.
(b) Date of appointment/Termination : N/A,
tion of appointment.
5. Date of which it is intended to open/re-open/abandon/dis-
continue the mine ... N/A.....
6. Actual date of open/re-opening/abandonment/discontinuation of
the mine : 07/11/2008.

Yours faithfully,

Signature :

Designation :

Date :

12/11/08
AGENT
LEDO COLLIERY
NECF, CIL

A16

नार्थ ईस्टर्न कोलफील्ड्स

कोल इण्डिया लिमिटेड

(महाराष्ट्र कंपनी)

महाराष्ट्र प्रबन्धन कार्यालय

मार्गरेटा - 786181 (असम)

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कॉर्पोरेट आईडी नं. L23109WB1973GO1028844

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NORTH EASTERN COALFIELDS

Coal India Limited

(A Maharatna PSU under MoC)

Office of the General Manager

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Corporate ID No. L23109WB1973GO1028844

E-mail: gm.nec.cil@coalindia.in

Letter No. : NEC/GM/CMPDI/2024/337

Date: 04.05.2024

To
The General Manager,
Environment Division,
Central Mine Planning and Design Institute Limited,
Gondwana Place,
kanke Road,
Ranchi-834031,
Jharkhand

Subject: Final Mine Closure Plan of Jeypore-Dilli Colliery (UG), Baragolai Colliery (UG) and Ledo Colliery (UG) of North Eastern Coalfields, Margherita, Assam

Sir,

NEC is sending herewith the minutes of the meeting held between CMPDIL officials and NEC officials regarding the Jeypore-Dilli Colliery (UG), Baragolai Colliery (UG) and Ledo Colliery (UG) during the visit of CMPDIL officials in NEC. The required modification to be done as discussed is given in the minutes of the meeting and the same is enclosed as Annexure - I.

This is for your kind perusal and necessary action please.

Thanking you.

Enclosures: As stated above.

Yours faithfully


General Manager
North Eastern Coalfields,
Coal India Limited,
Margherita, Assam

Report No.: ENV/NEC/CIL/22-23/AA-79
 Date : 27/01/2023

Order No.: NEC/EMLR/80/9239
 Date : 18/04/2022

Report Issued To : **NORTH EASTERN COALFIELDS
 COAL INDIA LIMITED
 Margherita - 786181 (Assam)**

Sample Ref. No.:	CIL/2023/AA-1001/03	Sample Source:	Pit No. 1 Mine Area (Ledo OCP)	Sample Type:	Ambient Air Sample
Sampling Start Date:	18-01-2023	Sampling End Date:	19-01-2023	Collected By:	Envirocon Representative

TEST RESULTS

Sl. No.	Parameters	Units	Results	Limits (As per NAAQS-2009)
1.	Particulate Matter (size less than 2.5 µm) or PM _{2.5}	µg/m ³	13.9	60 (24 Hours Average)
2.	Particulate Matter (size less than 10 µm) or PM ₁₀	µg/m ³	24.3	100 (24 Hours Average)
3.	Sulphur Dioxide (as SO ₂)	µg/m ³	BDL [MDL: 5.0]*	80 (24 Hours Average)
4.	Nitrogen Dioxide (as NO ₂)	µg/m ³	BDL [MDL: 6.0]*	80 (24 Hours Average)
5.	Ozone (as O ₃)	µg/m ³	BDL [MDL: 1.0]*	100 (1 Hour Average)
6.	Lead (as Pb)	µg/m ³	BDL [MDL: 0.01]*	1.0 (24 Hours Average)
7.	Carbon Monoxide (as CO)	mg/m ³	BDL [MDL: 0.01]*	6.0 (1 Hour Average)
8.	Ammonia (as NH ₃)	µg/m ³	BDL [MDL: 5.0]*	400 (24 Hours Average)
9.	Benzene (as C ₆ H ₆)	µg/m ³	BDL [MDL: 0.01]*	5.0 (Annual Average)
10.	Benzo(a)Pyrene (as BaP) - Particulate Phase Only	ng/m ³	BDL [MDL: 0.1]*	1.0 (Annual Average)
11.	Arsenic (as As)	ng/m ³	BDL [MDL: 0.01]*	6.0 (Annual Average)
12.	Nickel (as Ni)	ng/m ³	BDL [MDL: 0.01]*	20 (Annual Average)

Analysis Protocol: IS 5182

*BDL: Below Detection Limit, MDL: Minimum Detection Limit

Remarks: Nil.



Checked By: Mr. Pankaj Baroi, ENVIROCON

A18

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Report No.: ENV/NEC/CIL/Z2-23/AA-80

Date : 27/03/2023

Order No.: NEC/EMLR/80/9239

Date : 18/04/2022

 Report Issued To: **NORTH EASTERN COALFIELDS
 COAL INDIA LIMITED
 Margherita - 786181 (Assam)**

Sample Ref. No.:	CIL/2022/AA-1801/03	Sample Source:	Pit No. 1 Mine Area (Ledo OCP)	Sample Type:	Ambient Air Sample
Sampling Start Date:	18-01-2023	Sampling End Date:	19-01-2023	Collected By:	Envirocon Representative

TEST RESULTS

Sl. No.	Parameters	Units	Results	Limits
1.	Mercury (as Hg)	ng/m ³	BDL [MDL: 1.0]*	—
2.	Chromium (as Cr)	ng/m ³	BDL [MDL: 1.0]*	—

Analysis Protocol: Mercury (as Hg):- OSHA, Method ID-145, Chromium (as Cr):- USEPA IO- 3.2

*BDL: Below Detection Limit, MDL: Minimum Detection Limit

Remarks: Nil.



Checked By: Mr. Pankaj Baroi, ENVIROCON

A19

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E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified
ISO 45001:2018 Certified

Report No.: ENV/NEC/CIL/22-23/N-51
Date : 01/02/2023

Order No.: NEC/EMLR/180/9239
Date : 18/04/2022

Report Issued To: **NORTH EASTERN COALFIELDS
COAL INDIA LIMITED**
Margherita - 786181 (Assam)

AMBIENT NOISE LEVEL TEST RESULTS

Sl. No.	Location(s)	Date Of Measurement	Day Time L_{eq} (dB-A)	Limit Day Time L_{eq} (dB-A)	Night Time L_{eq} (dB-A)	Limit Night Time L_{eq} (dB-A)
I.	Mine Area (Ledo OCP)	21.01.2023	60.2	75	32.6	70

Limit:

Category of Area/ Zone	Limit in dB (A) L_{eq}	
	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

Remarks: Nil.



Checked By: Mr. Pankaj Barot, ENVIROCON

A20

NOTE:

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E-mail: envirocon@rediffmail.com

ISO 9001:2015 Certified
ISO 45001:2018 Certified

Report No.: ENV/NEC/CIL/22-23/DW-24

Date : 30/01/2023

Order No.: NEC/EMLR/80/9239

Date : 18/04/2022

Report Issued To: **NORTH EASTERN COALFIELDS
COAL INDIA LIMITED
Margherita - 786181 (Assam)**

Sample Ref. No.:	CIL/2023/DW-2101/01	Sample Source:	Tube-well water of Sipegaon (Ledo OCP)	Sample Type:	Drinking Water
Collected On:	21-01-2023	Received On:	21-01-2023	Collected By:	Envirocon Representative

TEST RESULTS

Sl. No.	Parameters	Results	Acceptable Limit*	Permissible Limit* in the Absence of Alternate Source
1.	Colour, Hazen Units, Max	2	5	15
2.	Odour	Odourless	Agreeable	Agreeable
3.	Turbidity, NTU, Max	0.2	1	5
4.	pH	6.71	6.5 - 8.5	No Relaxation
5.	Total Dissolved Solids, mg/l, Max	127	500	2000
6.	Calcium (as Ca), mg/l, Max	16	75	200
7.	Chloride (as Cl), mg/l, Max	11	250	1000
8.	Fluorides (as F), mg/l, Max	0.5	1.0	1.5
9.	Free Residual Chlorine, mg/l, Min	BDL [MDL: 0.001]**	0.2	1
10.	Iron (as Fe), mg/l, Max	0.22	0.3	No Relaxation
11.	Magnesium (as Mg), mg/l, Max	5	30	100
12.	Nitrate (as NO ₃), mg/l, Max	5.8	45	No Relaxation
13.	Sulfate (as SO ₄), mg/l, Max	72	200	400
14.	Total Alkalinity (as CaCO ₃), mg/l, Max	59	200	600
15.	Total Hardness, (as CaCO ₃), mg/l, Max	98	200	600
16.	Lead (as Pb), mg/l, Max	BDL [MDL: 0.001]**	0.01	No Relaxation
17.	Total Arsenic (as As), mg/l, Max	BDL [MDL: 0.001]**	0.01	0.05
18.	Phenolic Compounds (as C ₆ H ₅ OH), mg/l, Max	BDL [MDL: 0.001]**	0.001	0.002

Analysis Protocol: IS 3025

*Limits as per IS 10500:2012

**BDL: Below Detectable Limit, MDL: Minimum Detectable Limit

Remarks: Nil

Checked By: Mr. Pankaj Baroi, ENVIROCON

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ISO 9001:2015 Certified
ISO 45001:2018 Certified

Report No.: ENV/NEC/CIL/22-23/WW-277

Date : 02/02/2023

Order No.: NEC/EMLR/80/9239

Date : 10/04/2022

Report Issued To: **NORTH EASTERN COALFIELDS
COAL INDIA LIMITED**
Margherita - 786181 (Assam)

Sample Ref. No.:	CIL/2023/WW-2101/01	Sample Source:	Downstream of Ledo Pani Nallah (Ledo DCP)	Sample Type:	Surface Water
Collected On:	21-01-2023	Received On:	21-01-2023	Collected By:	Envirocon Representative

TEST RESULTS

S. No.	Parameters	Units	Results	Limits [G.S.R. 422 (E), 19.05.1993 & 31.12.1993]
1.	Colour and Odour	—	Colourless and Odourless	Colourless and Odourless
2.	Suspended Solids	mg/l	24	100
3.	Particulate Size of Suspended Solids	—	<850	Shall Pass 850 micron IS Sieve
4.	pH	—	6.10	5.5 – 9.0
5.	Temperature	°C	25.5	Shall not exceed 5°C above the receiving water temperature
6.	Oil and Grease	mg/l	BDL [MDL: 4.0]	Max. 10
7.	Total Residual Chlorine	mg/l	BDL [MDL: 0.01]	Max. 1.0
8.	Ammonical Nitrogen (as N)	mg/l	4.8	Max. 50
9.	Total Kjeldahl Nitrogen	mg/l	16	Max. 100
10.	Free Ammonia (as NH ₃)	mg/l	BDL [MDL: 0.01]	Max. 5.0
11.	Bio-chemical Oxygen Demand (3 days at 27 °C)	mg/l	14	Max. 30
12.	Chemical Oxygen Demand	mg/l	48	Max. 250
13.	Arsenic (as As)	mg/l	BDL [MDL: 0.001]	Max. 0.2
14.	Mercury (as Hg)	mg/l	BDL [MDL: 0.001]	Max. 0.01
15.	Lead (as Pb)	mg/l	BDL [MDL: 0.001]	Max. 0.1
16.	Cadmium (as Cd)	mg/l	BDL [MDL: 0.001]	Max. 2.0
17.	Hexavalent chromium (as Cr ⁺⁺)	mg/l	BDL [MDL: 0.001]	Max. 0.1
18.	Total Chromium (as Cr)	mg/l	BDL [MDL: 0.001]	Max. 2.0
19.	Copper (as Cu)	mg/l	BDL [MDL: 0.001]	Max. 3.0
20.	Zinc (as Zn)	mg/l	BDL [MDL: 0.01]	Max. 5.0

Continued—

Analysis Protocol: IS 3025

*BDL: Below Detection Limit, MDL: Minimum Detection Limit

Checked By: Mr. Pankaj Barge, ENVIROCON

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A22



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ISO 45001:2018 Certified

Report No.: ENV/NEC/CIL/22-23/WW-277

Date : 02/02/2023

Order No.: NEC/EMLR/90/9239

Date : 18/04/2022

Report issued To : **NORTH EASTERN COALFIELDS
COAL INDIA LIMITED**
Margherita - 786181 (Assam)

Sample Ref. No.:	CIL/2023/WW-2101/01	Sample Source:	Downstream of Ledo Pani Nallah (Ledo OCP)	Sample Type:	Surface Water
Collected On:	21-01-2023	Received On:	21-01-2023	Collected By:	Envirocon Representative

TEST RESULTS

S. No.	Parameters	Units	Results	Limits [G.S.R. 422 (E), 19.05.1993 & 31.12.1993]
21.	Selenium (as Se)	mg/l	BDL [MDL: 0.001]	Max. 0.05
22.	Nickel (as Ni)	mg/l	BDL [MDL: 0.001]	Max. 3.0
23.	Cyanide (as CN)	mg/l	BDL [MDL: 0.001]	Max. 0.2
24.	Fluoride (as F)	mg/l	BDL [MDL: 0.1]	Max. 2.0
25.	Dissolved Phosphate (as P)	mg/l	BDL [MDL: 0.01]	Max. 5.0
26.	Sulphide (as S)	mg/l	BDL [MDL: 0.01]	Max. 2.0
27.	Phenolic Compounds (as C ₆ H ₅ OH)	mg/l	BDL [MDL: 0.001]	Max. 1.0
28.	Bio-assay Test	--	90	90% survival of fish after 96 hours in 100% effluent
29.	Manganese (as Mn)	mg/l	BDL [MDL: 0.001]	Max. 2.0
30.	Iron (as Fe)	mg/l	0.26	Max. 3.0
31.	Vanadium (as V)	mg/l	BDL [MDL: 0.001]	Max. 0.2
32.	Nitrate Nitrogen	mg/l	0.7	Max. 10
	--End of Report--			

Analysis Protocol: IS 3025

*BDL: Below Detection Limit, MDL: Minimum Detection Limit

Remarks: Nil.



Checked By: Mr. Pankaj Baroi, ENVIROCON

A23

NOTE: 1. Results reported are valid at the time of and under the prevailing conditions of measurement.

2. Results refer only to the particular parameters tested.

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Core Services: Environmental Monitoring & Data Generation, EIA & EMP, Environmental Audit & Allied Environmental Management jobs
Associate Services: Certification by Competent Person (CIP), NDT, Hydraulic Testing, Chartered Engineer Services etc.

Rain Fall _ Tirap Colliery (Near LEDO)

	2020-21			2021-22			2022-23			2023-24		
Month	Rainfall in mm	No. of day Rain	not rainfall day	Rainfall in mm	No. of day Rain	not rainfall day	Rainfall in mm	No. of day Rain	not rainfall day	Rainfall in mm	No. of day Rain	not rainfall day
April	186.03	17	14	43.94	5	25	349.56	20	10	215	14	17
May	364.92	23	8	460.19	21	10	387.16	23	8	156.7	16	15
June	547.86	25	5	484.64	22	8	691.91	29	1	347.5	22	8
July	594.89	25	6	426.05	21	10	419.19	19	12	287.3	22	8
August	516.72	19	12	633.22	24	7	436.2	24	7	348.7	23	8
September	537.35	18	12	312.16	9	21	140.6	15	15	286.7	9	21
October	326.76	12	18	59.89	5	26	153	14	17	148.9	9	21
November	95.14	6	24	17.78	2	28	0	0	30	12.3	2	28
December	10.16	1	30	8.38	1	30	9.1	2	29	34.5	4	27
January	7	2	29	31.7	9	22	0.4	1	30			
February	10.64	3	24	70.56	11	17	139.5	10	18			
March	54.18	8	23	60.81	4	27	166.2	13	18			
Total	3251.7	159	205	2609.3	134	231	2892.8	170	195	1837.6	121	153

Annexure XIV**CSR Activities At NEC**

18	Details of CSR taken up		(Amount in lakhs)		
	A	2016-17	61.446		
	B	2017-18	43.05		
	C	2018-19	151.80		
	D	2019-20	95.995		
	E	2020-21	724.00		
	F	2021-22	536.00		
	G	2022-23	205.38		
	H	2023-24	159.47		
19	Identification any community related activities to be taken up in next 5 years				
	A	Prior to 2020	1. Skill training in plastic engineering through CIPET-Guwahati – 100 students from NEC's periphery 2. Ambulance to Assam govt. 3. Promotion of preventive healthcare in Assam-NILA 4. Project – Uttaran, a coaching for BPL students in Margherita, Assam 5. Setting up of Solid Waste Management plant in Kamakhya temple, Assam 6. Promotional and preventive healthcare through increased awareness in rural population where literacy is low-Prayas, Assam 7. Health camps		
	B	2020-21	1. Financial assistance for 2 water ambulances (Assam State Disaster Management Authority (ASDMA), Assam 2. Rehabilitation and livelihood development of flood affected people Deputy Commissioner, Majuli, Assam		
	C	2021-22	1. Skill training in plastic engineering through CIPET-Guwahati – 50 students from NEC's periphery and Margherita sub-division, Assam. 2. Setting up of an ICU and Medical Gas Pipeline in Silchar Medical College, Assam. 3. Activities like wall painting in school on Freedom Fighters, Installation of drinking water facility in school, water filter in schools, Awareness & IEC activities in schools etc.) in celebrating Azadi Ka Amrit Mahotsav in the command area of NEC, Margherita		
	D	2022-23	1. Skill training in plastic engineering through CIPET continued.		

			2. Developing ecotourism in Tipong aimed at developing sustainable livelihoods for local population (Sanctioned Amount 18.30 lakhs) 3. CSR projects in Darrang District (Aspirational District) of Assam (Sanctioned Amount – 198.27 lakhs) 4. Health Camp in Jagun Gaon Panchayat, Margheirita Sub-Division. 5. Distribution of dry ration for poor people affected with flood in different villages of Assam implemented through ISKON, Guwahati.
	E	2023-24	1. Developing ecotourism continued. 2. Armed Forces Preparatory School (in partnership with Coal India Limited) under CSR in Dibrugarh, Assam. 3. CSR projects in Aspirational District continued.
			Other Activities for the days to come : • Construction of Boys Hostel in Industrial Training Institute, Ledo (70 L) • Beautification of 4 nos of Anganwadi centers (30 L) • Adoption of 1000 nos. TB Patients under Ni-kshay Mitra Programme of Govt. of India for 06 months (30 L) • Construction of Boundary Wall & Gate in Maharam Boro School in Bhattor Pawai Panchayat (17.4 L) • Construction of Boundary Wall/ Office Room in Banua School, Rampur in Jagun Panchayat (21.4 L) • Various CSR works in Anganwadi Centers near NEC (0.50 L) • Medical Health Camps (1.80 L) • Ceiling in nearby School (1.65 L) • Grass cutting machine to Margherita Municipality (0.40 L) • Conducting Margherita Debate Masters Competition (0.60 L)

Waste disposable project : innovation was made for massive floral tribute in the temple which when degraded made the vicinity of the temple area unhygienic . As such, the waste is turned into manure



1

CONSTRUCTION OF BHOJANALAYA AT KAMAKHYA, GUWAHATI



2

**SKILL DEVELOPMENT – PLASTIC TECHNOLOGY
TRAINING FOR UNEMPLOYED YOUTH at cipet guwahati**

- BENEFEICIARIES –Candidates from Margherita Sub-Division.



FLAGGING OFF OF
CANDIDATES FOR
CIPET TRAINING AT
MARGHERITA

CIPET GUWAHATI AND INTERACTION WITH CANDIDATES.

3

**Skill Development training centre for
underprivileged WOMEN – Margherita**

- Beneficiaries : 30 Women
- Skill sets : Basic Computer and Stitching



WOMEN AT THE TRAINING CENTRE

4

Construction of bhupen hazarika children park at Margherita



Children park is an attraction for the people of Margherita to relax and also it adds beauty to the place

5

Medical Camps



6

Armed Forces Preparatory School (A CSR initiative of Coal India Limited)



Fully residential centre to coach and mentor the local youth to join the Armed Forces primarily and as Plan B/alternative the project will also prepare the beneficiaries for other misc. careers/ streams viz., Maritime Entrance exams, Technical Entry Schemes of Indian Army, Railway Recruitment Board (RRB Examination), State Public Service Commission Examinations etc. Beneficiaries 50 Boys/Girls. Project Cost 99.99 lakhs.

7

Nutritional support as food baskets for 1000 nos TB patients as Nikshay-Mitra in Tinsukia District, Assam



Supporting TB patients being a Nikshay Mitra by providing nutritional support as (food baskets) to TB patients on treatment every month for 1000 nos. of TB patients in Tinsukia District of Assam. The programme is in line with ministry of Health and family welfare (MoHFW), Govt. of India with a goal to end TB by 2025. ISKCON, Guwahati has joined hands for supply and distribution of Food Baskets for 1000 no's of Tuberculosis (T.B.) patients. Total Project Cost – 30.0 Lakhs.

8

REGISTERED OFFICE

Gondwana Place, Kanke Road
Ranchi - 834 031
(Jharkhand)

REGIONAL INSTITUTES

क्षेत्रीय संस्थान-I

वेस्ट एंड, जी.टी.रोड
आसनसोल-713 301
(पश्चिम बंगाल)

Regional Institute - I

West End, G.T Road
Asansol - 713 301
(West Bengal)

क्षेत्रीय संस्थान-II

कोयला भवन, कोयला नगर
धनबाद- 826 005
(झारखंड)

Regional Institute - II

Koyla Bhawan, Koyla Nagar
Dhanbad - 826 005
(Jharkhand)

क्षेत्रीय संस्थान-III

गोंदवाना प्लेस, कान्के रोड
राँची- 834 031
(झारखंड)

Regional Institute - III

Gondwana Place, Kanke Road
Ranchi - 834 031
(Jharkhand)

क्षेत्रीय संस्थान-IV

जरीपटका, कास्तूरबा नगर
नागपुर-440 014
(महाराष्ट्र)

Regional Institute - IV

Jaripathka, Kasturba Nagar
Nagpur - 440 014
(Maharashtra)

क्षेत्रीय संस्थान-V

सीपाट रोड
बिलासपुर-495 001
(छत्तीसगढ़)

Regional Institute - V

Seepat Road
Bilaspur - 495 001
(Chattisgarh)

क्षेत्रीय संस्थान-VI

पोस्ट जयन्त कोलरी,
जिला : सिंगरौली
पिन कोड- 486 890
(मध्य प्रदेश)

Regional Institute - VI

P.O Jayant Colliery
Dist. - Singrauli
PIN - 486 890
Madhya Pradesh

क्षेत्रीय संस्थान-VII

गृह निर्माण भवन
सचिवालय मार्ग
भुवनेश्वर-751001
(उड़ीसा)

Regional Institute - VII

Grih Nirman Bhawan
Sachivalaya Marg
Bhubneswar - 751 001
(Orissa)

सेन्ट्रल माईन प्लानिंग एंड डिजाइन इन्स्टीच्यूट लिमिटेड

(कोल इंडिया की अनुबंधी कम्पनी)
एक मिनो रत्न कम्पनी

Central Mine Planning & Design Institute Limited

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