KA PASOH

BAN IOH JINGBIT IA KA ENVIRONMENT CLEARANCE

(Category - B1, under item 1 (a), as per EIA Notification 14th September' 2006 and its subsequent amendments till date)

IA

"WAHRIANG LIMESTONE MINE"

Jaka: - ha Wahriang, Khliehshnong, Elaka Rymbai, District – East Jaintia Hills, Meghalaya.

Jingpynmih ba lah ban pynmih : - 1,33,750 TPA of ROM (Mawshun: - 1,20,375 TPA;

Jaboh: - 13,375 TPA)

Jingheh ka Jaka: - 1.33 Ha;

LOI la ioh ha ka tarik 30.09.2021

Por ba Lease: - 15 Years (Naka tarik ba register)

Jingtipbniah ia ka TOR	**:**	**Issued from SEIAA, Meghalaya**
Baseline data ba la pynmih	**:**	**Lber' 2022 to Jymmang, 2022 (Pre Monsoon)**
Project Jinglut	**:**	**Rs. 20.0 Lacs**

PROMOTER

Shri. Bigen Rupsi

R/o. Umlong Village, District – East Jaintia Hills,State – Meghalaya

ENVIRONMENTAL CONSULTANT

Gaurang Environmental Solutions Pvt. Ltd.

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NABET Accreditation: NABET/EIA/2023/ RA0192 (Rev. 01)

September, 2022

KA PASOH

1.0 KA JINGSDANG.

Ka project ba la kdew "Wahriang Limestone Mine" ka ba don ha Wahriang, Khliehshnong, Elaka Rymbai, District- East Jaintia Hills (Meghalaya). Ka jaka baroh ba la mang naka bynta kata ka project ka long 1.33 ha. Ka rukom tih ia u mawshun kan long da kaba shu khlong ia ka khyndew da ki kor ki bor bad sa kaba shu ksam shapoh bad pynpait ia u maw. Ka letter of intent la ai ha ka kyrteng jong U Bigen Rupsi na ka Office jong ka Govt. of Meghalaya, The Department of Forests and Environment, Office of the Divisional Forest Officer: West Jaintia Hills Territorial Division, Jowai lyngba ka shithi no. JH/BR/ML/2021-22/LS/B/1053 dated 30.09.2021 ia kaba la ai por haduh u 30.03.2022. Ka jaka ba la ioh jingbit na ka bynta ka mining ka don ka jingheh kumba 1.33 ha. Bad ka mineable reserves ne ka jingdon u maw ka long 5,27,000 TPA ha katto ka jaka, ban pynmih 1,33,750 metric ton ha ka shnisnem (TPA) ROM (Mashun – 1,20,375 TPA bad 13,375 metric ton ha ka shisnem ka jaboh.)

1.1 KYRTENG JONG KA JAKA.

Ka projek ba la mang "Wahriang Limestone Mine" kadon ha Wahriang, Khliehshnong, Elaka Rymbai , District- East Jaintia Hills (Meghalaya).

1.2 KI MAT JONG KANE KA PROJEK.

Sl. No.	Particulars	Details
1.	Kyrteng jong ka Project	Wahriang Limestone Mine
2.	Jaka	Wahriang, Khliehshnong, Elaka Rymbai, District – East Jaintia Hills, Meghalaya.
3.	Jing heh jong ka jaka na ka bynta kata ka project.	1.33 Ha.
4.	Jait Jaka	Khatedari Land (Jaka la jong)
5.	Latitude & Longitude	25°10'31.06"N to 25°10'36.08" N and 92°20' 09.02" E to 92°20' 13.06"E
6.	Ka jingpeit na ka liang ka jing Khynniuh u Jumai	Ka hap hapoh ka Zone – V

1.3 JINGBATAI IA KA PROJEK

Ka Letter of Intent ba la ai ia U Bigen Rupsi vide letter no JH/BR/ML/2021-22/LS/B/1053 dated 30.09.2021 ia kaba la ai por haduh u 30.03.2022. Ka jaka ba la mang na ka bynta ka mining ka don ka jingheh kumba 1.33 ha. bad ka mineable reserves ne ka jingdon u maw ka long 5,27,000 Tonnes ha katto ka jaka, ban pynmih 1.33,750 metric ton ha ka shnisnem (TPA) u Mawshun, bad ka jingpyniaid ia u mawshun (ROM) (Mawshun – 1,20,375 TPA bad 13,375 metric ton ha ka shisnem (TPA) ka jaboh). Ka rukom tih ia u mawshun kan long da kaba shu khlong ia ka khyndew da ki kor ki bor bad sa kaba shu ksam shapoh bad pynpait ia u maw.

1.4 GEOLOGY

1.4.1 LOCAL GEOLOGY

U Mawshun u paw ha baroh ka jaka ba la kdew, ymdon shuh kiwei kiwei ki maw ba paw ha ka jaka ba la mang. U mawshun u la dain ha jan ka Shatei – Shathie bad ngam pynieng ha bam don ka jingtreikam. Ym don jingduna, jingkhylliap bad jingthut geological ba la iohi ha kane ka jaka ba shim wai. Ka jingwan jong ki maw ha ka jaka shim wai la ai harum:-

Table 1.1: Local Geology

Geological Age	Group Name	Formation Name	Rock Type
Recent	Newer Alluvium	Unclassified	Sand, Silt and Clay
----------UNCONFIRMITY----------			
Eocene	Jaintia Group	Shella Formation	Lime Stone

1.4.2 PHYSIOGRAPHY

Ka topography jong ka jaka ba la kdew ka long khohruh khohram ba ym long madam don ba long lum don ba long madan, Haka jingjrong ba jrongtam ka long 621 MSL bad haka jingjylliew ba shapoh 597 MSL. Ka nala ba don ha ka jaka ba ka kdew ka long shathie lam shatei.

1.4.3 GEOLOGICAL AND MINEABLE RESERVES

Geological Reserve : 17,92,800 MT

Mineable Reserve : 5,27,000MT

Jinglah Pynmih : 1,33,750 TPA of ROM

Jingbuh por ia ka jingdon u mar : 05 Years

1.4.4 KA RUKOM TIH IA U MAR POHKHYNDEW.

Ka rukom tih ia u mawshun kan long da kaba shu khlong ia ka khyndew da ki kor ki bor bad sa kaba shu ksam shapoh bad pynpait ia u maw. Ka jingpyntreikam kan long kat kum ka Mining Plan ba la ioh jingbit bad PMCP ka dei:-:-

- Ka rukom tih ia u mawshun kan long da kaba shu khlong ia ka khyndew da ki kor ki bor bad sa kaba shu ksam shapoh bad pynpait ia u maw.
- Ka mied jingjrong yn buh 6m bad jingiar jong ka mied kam dei ban duna ia ka mied jingjrong.
- Baroh phra mied yn pynbha kata naduh ka level Mied 619 mRL (Nalor mied), 613 mRL, 607 mRL, 601 mRL, 595 mRL, 589 mRL, 583 mRL, 577 mRL, bad 571 mRL (duna mied).
- Jingpynbthei yn leh da ki thliew barit bad bajrong da ka jingioh jingbit na DGMS
- Ka slope mied kan ai 85°.
- Ka jingrah kan long na ki jaka buh ne ki stocks.

1.4.5 KA JINGTIP JONG KA JINGMIH.

Ka jingpynmih ia u mawshun hapoh san snem kan long katkum ba la kdew harum:-

Table 1.2: Production Details

Year	ROM (T)	Waste / sub-grade (T)	Limestone (T)
1st Year	1,33,750	13,375	1,20,375
2nd Year	1,33,500	13,350	1,20,150
3rd Year	1,11,150	11,125	1,00,025
4th Year	1,11,150	11,100	1,00,050
5th Year	89,850	8,975	80,875
Total	**5,79,400**	**57,925**	**5,21,475**

1.4.6 KA JING PYNDONKAM IA KA JAKA:

Ka jingpyndonkam ia ka jaka ba la kdew na ka bynta ban tih ia u marpoh khendew ka kynthup ia ka jing khlong iaka khyndew ba tap najrong, nangta pynpait ia u maw ba la paw hajrong hadien ba la dep pynkhuid ia ka khyndew bad kan long kum ba la kdew harum:-

Table 1.3: Ka jingpyndonkam ia ka jaka:

S. No.	Land Use Category	Pre-Operational (Ha.)	Operational (Ha.)	Post-Operational (Ha.)
1	Top Soil Dump	00	0.01	00
2	Overburden Dump	00	0.08	0.08 (Reclaimed by Plantation)
3	Excavation (Voids Only)	00	1.09	0.40
4	Road	00	0.02	0.02 (Public Use)
5	Built Up Area	00	0.01	0.01 (Public Use)
6	Township Area	00	00	00
7	Afforestation	00	0.10	0.12
8	Reclamation (Backfilled)	00	00	0.69 (Plantation)
9	Mineral Storage	00	0.01	00
10	Sub – grade stack yard	00	00	00
11	Undisturbed Area	00	0.02	0.01 (Plantation)
Total		**1.33**	**1.33**	**1.33**

1.5 KA JINGLONG KA MARIANG:

Ban peit bha ia ka mariang kum ka meterorology, ka lyer, ka um, ka khyndew bad ka jinglong jong ka jingsawa, ki jaka peit bniah la buh ha ki hynriew jaka ha ka jaka ban pule/peit thuh. Ia ka baseline data la shimm ha ka por pyrhaw (Lber' 2022 haduh Jymmang' 2022). Ia ka jingbatai bniah ha kine ki jaka la ai harum:-

Table 1.4: Sampling Location

Sampling Location	Distance (Km)	Direction	Components
Mine Site (Shri Bigen Rupsi)	--	--	Air, Water, Noise, Soil
Near Dalmia Cement Bharat Limited	2.0	NE	Air, Water, Noise, Soil
Lumsnang	4.1	ENE	Air, Water, Noise, Soil
25° 9'52.57"N 92°20'56.18"E (Location-4)	1.7	SE	Air, Water, Noise, Soil
Umlong	0.4	S	Air, Water, Noise, Soil
25°10'32.71"N 92°19'15.16"E (Location-6)	1.4	W	Air, Water, Noise, Soil
25°11'30.97"N 92°19'51.21"E (Location-7)	1.9	NNW	Air, Water, Noise, Soil

1.5.1 KA JINGLONG JINGMAN KA JAKA.

1.5.1.1 Ka Jinglong ka khyndew:

Ki symboh khyndew la shim na ki hynriew jaka bad ha ka jingpait bha ia ka jingshong ka khyndew ka long harum:

pH	:	7.41 – 8.05
Total Organic Matter	:	0.41 – 0.94 (% by mass)
Nitrogen as N	:	0.021–0.036(mg/100gm)
Phosphorus as P	:	10.80–12.76 (meq/100gm)
Potassium as K	:	74.60 – 297.75 (mg/kg)

1.5.1.2 Ka Jinglong Jingman jong ka Um:

Ki um na ki hynriew tylli ki jaka ban pule la shim. Ka jingiohi ia ka jingtohkit la pyni harum:-

Table 1.6: Water Quality Status

Sr. No.	Parameter	Requirement (Desirable Limits).	Permissible Limits in the Absence of Alternate Source.	Units	Mine Site (Shri Bigen Rupsi)	Near Dalmia Cement Bharat Limited	Lumsnang	25° 9'52.57"N 92°20'56.18"E (Location-4)	Umlong	25°10'32.71"N 92°19'15.16"E (Location-6)	25°11'30.97"N 92°19'51.21"E (Location-7)
1.	Colour	5	25	Hazen	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2.	Odour	Agreeable	Agreeable	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3.	Taste	Agreeable	-	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4.	Turbidity	5	10	NTU	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
5.	pH value	6.5-8.5	-	-	7.51	7.25	7.38	7.68	7.21	7.36	7.48
6.	Total Dissolve Solid (TDS)	500	2000	mg/l	318	326	320	336	322	250	280
7.	Aluminum (as Al)	0.03	0.2	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8.	Anionic surface Detergents(as MBAS)	0.2	1.0	mg/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9.	Boron (as B)	0.5	2.4	mg/l	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
10.	Calcium (as Ca)	75	200	mg/l	51.0	54.2	51.4	58.8	60.5	54.0	51.3
11.	Chloride (as Cl)	250	1000	mg/l	16.8	15.2	12.5	17.6	15.1	15.0	12.6
12.	Copper (as Cu)	0.05	1.5	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
13.	Fluoride (as F)	1	1.5	mg/l	0.25	0.36	0.28	0.35	0.26	0.18	0.25
14.	Iron (as Fe)	1.0	No Relaxation	mg/l	0.130	0.123	0.127	0.140	0.119	0.121	0.118
15.	Magnesium (as Mg)	30	100	mg/l	6.89	4.71	17.0	7.96	2.60	15.4	17.2
16.	Manganese(as Mn)	0.1	0.3	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

17.	Mineral Oil	0.5	No Relaxation	mg/l	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
18.	Nitrate (as NO_3)	45	No Relaxation	mg/l	2.55	2.21	4.16	4.08	3.40	2.16	2.54
19.	Selenium (as Se)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
20.	Sulphate (as SO_4)	200	400	mg/l	26.0	32.4	34.6	28.4	32.1	32.0	27.8
21.	Alkalinity (as Ca CO3)	200	600	mg/l	178	164	180	165	170	189	192
22.	Total Hardness (as $CaCO_3$)	200	600	mg/l	156	155	160	180	162	161	175
23.	Zinc (as Zn)	5	15	mg/l	0.136	0.118	0.122	0.127	0.140	0.128	0.131
24.	Cadmium (as Cd)	0.003	No Relaxation	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
25.	Cyanide (as CN)	0.05	No Relaxation	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
26.	Lead (as Pb)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
27.	Mercury (as Hg)	0.001	No Relaxation	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
28.	Arsenic (as As)	0.01	No Relaxation	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
29.	Total Chromium (as Cr)	0.05	No Relaxation	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
30.	Conductivity µmhos/cm	-	-	µmhos/cm	496	508	498	521	502	389	421

1.5.2 Jinglong Jingman jong ka Lyer:

Ban peit bha ia ka jinglong jong ka lyer ha ka jaka pule ka systematic ambient air quality monitoring la pyniaid ia ki jait jingjaboh (PM_{10}, $PM_{2.5}$, NO_X, SO_2 and CO) ha ki phra jaka ba don ki ambient air quality monitoring stations.

1.5.2.1 Jinglong ka Lyer

Ka Ambient air quality monitoring la pyniaid shakhmat ha ka por ar sien shi taiew ha ki phra jaka ha kawei ka aiom kata naduh Lber' 2022 haduh Jymmang' 2022. Ka jingiohi ia ka jinglong jong ha baroh ki jaka ki long kumne harum. Ia kine la pyniahap kat kum ka jingbuh da ka Central Pollution Control Board (CPCB) jong ka rural bad residential zone.

Table 1.7: Ambient Air Quality Status

S. No.	Sampling Location		Parameters				
			PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_x ($\mu g/m^3$)	CO (mg/m^3)
1.	Mine Site (Shri Bigen Rupsi)	**Min**	46.3	22.61	4.24	8.43	0.25
		Max	58.7	27.54	8.14	10.46	0.91
		Avg.	50.09	24.44	6.00	9.43	0.65
		98th% ile	56.13	27.17	7.72	10.46	0.91
2.	Near Dalmia Cement Bharat Limited	**Min**	35.41	14.32	5.35	8.54	0.47
		Max	45.02	21.38	7.89	10.98	0.85
		Avg.	40.98	16.62	6.89	9.95	0.62
		98th% ile	44.61	21.22	7.89	10.98	0.82
3.	Lumsnang	**Min**	40.92	16.72	5.03	8.84	0.48
		Max	53.4	23.84	7.54	10.9	0.92
		Avg.	44.97	18.79	6.18	9.80	0.70
		98th% ile	51.48	23.38	7.51	10.89	0.89
4.	25° 9'52.57"N 92°20'56.18"E (Location-4)	**Min**	40.02	20.96	5.78	8.6	0.25
		Max	52.97	32.97	8.2	13.2	0.48
		Avg.	48.08	27.97	6.88	10.41	0.37
		98th% ile	52.94	32.09	8.19	12.89	0.48
5.	Umlong	**Min**	36.02	14.78	4.33	7.09	0.46
		Max	55.3	24.2	8.44	12.64	0.79
		Avg.	47.25	20.29	7.22	9.58	0.62

		98th% ile	53.83	24.05	8.43	12.64	0.78
6.	25°10'32.71"N 92°19'15.16"E (Location-6)	**Min**	32.58	13.79	4.8	6.14	0.45
		Max	49.5	22.4	6.5	8.86	0.55
		Avg.	40.69	17.29	5.63	7.45	0.51
		98th% ile	48.13	22.37	6.41	8.69	0.55
7.	25°11'30.97"N 92°19'51.21"E (Location-7)	**Min**	34.25	15.43	5.37	6.55	0.32
		Max	49.39	22.43	7.67	8.69	0.92
		Avg.	42.20	17.76	6.10	7.45	0.57
		98th% ile	48.99	22.06	7.64	8.64	0.90
NAAQ STANDARDS			**100**	**60**	**80**	**80**	**02**

1.5.3 Jinglong Jingman Jongka JIngsawa.

Ka jingthew ia ka jingsawa la pyniaiad ban tip bha ia ka jinglong ka jingsawa ha ki hynriew jaka ban pule. Ka jingthew ia ka jingsawa ha man ki jaka la shim ha 24 kynta. Ka jingiohi ba la ioh la pyniahap bad ka national standards bad la shem ba long kat kum ka standard. Ki data ba la ioh la pyni harum:-

Table 1.8: Ambient Noise Level Status

Location	Date of Sampling	Day Time (6.0 AM to 10.0 PM)	Night Time (10.0 PM to 6.0AM)
Mine Site	**01/03/2022**	58.2	43.5
Near Dalmia Cement Bharat Limited	03/03/2022	62.4	50.2
Lumshnong	05/03/2022	54.2	42.6
25° 9'52.57"N 92°20'56.18"E (Location-4)	06/03/2022	52.5	43.0
Umlong	08/03/2022	53.6	41.5
25°10'32.71"N 92°19'15.16"E (Location-6)	10/03/2022	52.8	36.0
25°11'30.97"N 92°19'51.21"E (Location-7)	12/03/2022	51.6	40.0
Standards			
Category of Area/ Zone		**Day Time**	**Night Time**
Industrial Area		75	70
Commercial Area		65	55
Residential Area		55	45
Silence Zone		50	40

1.5.4 Ka jingioh jingkot jong ki briew:

Ka jaka pule ka kynthup ia 26 tylli ki shnong ha Wahriang, Khliehshnong, Elaka Rymbai, District- East Jaintia Hills District(Meghalaya) hapoh 10 km ka jaka sawdong na ka mine.

Table 1.9: Demography Profile of the Study Area

S. No.	Particulars		Details
1.	No. of Villages		26
2.	Total Population		9007
	a.	Male	4592
	b.	Female	4415
3.	No. of Households		1640
4.	No. of Literates		4360
	a.	Male	2191
	b.	Female	2169
5.	Main Workers		2841
	a.	Male	1893
	b.	Female	948
6.	Marginal Workers		446
	a.	Male	207
	b.	Female	239
7.	Non-workers		5720
	a.	Male	2492
	b.	Female	3228

(Source: Census, 2011)

1.5.5 Jingmih ha ka Mariang:

Core Zone	Buffer Zone
Flora	
Grass - 3 Species	Grass - 10 Species
Climber – 6 Specie	Climber – 19 Specie
Herb – 7 Species	Herb – 40 Species
Shrubs - 8 Species	Shrubs - 70 Species
Tree - 9 Species	Tree - 74Species

Fauna	
Amphibian - 6 Species	Amphibian – 17 Species
Reptiles - 4 Species	Reptiles - 16 Species
Avifauna - 31 Species	Avifauna – 93 Species
Butterflies – 4 Species	Butterflies – 28 Species
Mammals – 2 Species	Mammals – 28 Species

1.6 Ka Jingtreikam bad ka Jingtehlakam ia ki Jingma:

Ka jingpeit ia ka jingma ka dei ka jingpule ba dap da ka jingbamtikna bad mad jingma ha ki katno katne ki jaka. Ban peitngor ia ka jingma ka dei ban ithuh ia ki jingma ba iadei bad ka jingpyntreikam mining, bad ban sgewthuh kumno bad hangno yn shem bad ianujor ia ka jingkynduh (ha ka pisa lane ha kiwei kiwei) ha ka jingmih. Ka pyni bad nujor ia ki jingma ia ki riew shimet, ki kam bad government agencies ba lah ban ioh na ka mariang lane da ki jingjia ki briew.

Tangba kin don hi kato katne ki daw kiba lah ban pynlong kaba ma ha ki por treikam/jingmaham ha ba tih ia u mawshun (major minerals). Ia ki jait jingma la pynithuh por tih mawshun bad la pyni harum:-

1. Ba mynsaw por pynkiew, pyniaid bad bret ia u maw.
2. Ba mynsaw da ka daw bai aid kali
3. Ba rung um

Ban pyniaid bha ia ki kam ki jam, ki jingkdew harum yn bud na ka bynta ban iada na ki mynsaw ha ka mine.

Step 1: Ki jingïit ia ki jingma ba ktah na ka jingpynjot

Step 2: Ki jingïit ia ki briew ba don ha ka jingma

Step 3: Ki jingwengnoh ia ki jingjulor

Step 4: Ka jingtipbniah na ka bynta ka jingma

Step 5: Ki lad ban iada ba iadei ban shim

Step 6: Ban buh jingkhein

Step 7: Ban peit biang

1.7 Ka Jingpynkreh bad ban tehlakam na ka jingjot jongka Mariang(EMP):

Impact	Mitigation Measures
Jinglong bad ka jingpynkhreh na ka bynta Jaka	
Ka khyndew kan sa julor namar ba tih bad bret ia ki jaboh.	➢ Ka jingkyllum ban tih ia ka thliew kan long 1.09 ha. na ka 0.40 yn pyndonkam kum ban buh um 0.40 ha bad kaba tam 0.69 ha. yn pyndap khyndew, ban kam biang bad pynbha daka thung jingthung.
Jinglong bad ka jingpynkhreh na ka ban ym pynjaboh pynjaklia ia ka um Um	
Ban pyllait ia ki um jakhlia na ka Jaka Trei. Ka jingiakynduh ka um khyndew por pyntreikam ha ka jingtih.	➢ Kan nym don jingpyllait um jakhlia na ka jaka tih. Jaka tih (0.40 ha.) kan long kum ka jaka buh um. ➢ Kat kum ka Mining Plan ba la shim bad ka PMCP, ka jingheh jong ka pit (571 MSL) kan long hajrong ka um khyndew bad kan ym kynduh.
Jinglong bad ka jingpynkhreh na ka ban yn ym pynsniew Lyer	
Pumpum kan her por tih, por rah bad pynhiar. Ki lyer jaboh kin bha na ba iaid kali.	➢ Ia ki kali bai aid ha ka jaka treikam yn shna bad peit bha ban buh ka jingmih lyer hapoh ki adong. ➢ Ha jaka pynhap bad pynkiew bad ki lynti iaid, yn pynbuh um ban pashaid ban pynduna ka jingmih kynpum. ➢ Ha ban pyrthuh ia ka jingkylla ha ka jinglong jong ka lyer, AERMOD version 8.8.0 model la pyndonkam. Ka baheh tam ba pynkiew ia ka jingkhleh khyndew PM_{10} & $PM_{2.5}$, bad lyer jaboh NO_X & CO na ki bapher ki jaka ba tih ha ka por pule (pyrhaw) la iohi ba ka long 2.7678 $\mu g/m^3$, 1.8227 $\mu g/m^3$, 0.055 $\mu g/m^3$ bad 0.00012 mg/m^3. ➢ Ki jingmih kan iai don hapoh ka National Ambient Air Quality Standards na ki bynta ki kharkhana/ jaka sah briew.
Jinglong bad ka jingpynkhreh na ka bynta Jingsawa	
Jingsawa na ka daw ba leh mining Jingsawa na ka daw ba iaid kali.	➢ Ka jingsawa na baroh ki jaka ka long man ka por bad hatang por treikam ➢ Ka jingthew ia ka jingsawa ba la shim data ha ka jaka ka long hapoh ka adong jong ka National Ambient Noise Quality Standards ➢ Ka jingdon jong ka jingsawa ka long duna ha kane ka jaka ba la kah ki lum ki wah/ba shna kali.

Ka Jingioh Jingkot ne Ka Jingiarap na ka bynta ki Briew	
➢ Jingiohkam ➢ Jingpeit bniah iaka jingkot jingkhiah ➢ Jaka ai pule	➢ Ka jingtreikam mining kam ktah than ia ka jingioh jingkot ki briew ➢ Kam don jingkynriah (0) ha ka jaka ba la mang ban leh mine. ➢ Kumba 35 ngut ki nongshong shnong kin ioh lad treikam ryngkat bad ka jinghikai man ka por ban pyntbit ki sap bapher. ➢ Ki rukom bathymmai ban aikam/ioh pisa yn sa ioh pynmih. ➢ Ka jingpeit ia ka jingkoit jingkhiah man ka por da ki health camp. ➢ Ka jingiarap skul bad ioh scholarship ia ki khynnah yn ai.
Jingmih ha ka Mariang	
➢ Jingktah jong ka jingkylla ha jinglong jingman jong ka mariang ➢ Ki mrad bad ki jingthung ki ban shah ktah.	➢ Ka jingpyntreikam ia ka minning kan don ka jingktah bajur bha ia ki mrad bad jingthung jingtep. Ka jinglong jong ka projek ka long ban iarap ia ki jinghung jingthep ha ka jak aba la thmu. ➢ Ki jingthung jingtep ba don ha ka jaka mining ki long ki dieng bad sanium. Kin nym shah pynthud na ka daw ka jingpyntreikam mining. Te, ka jingktah ia ki jingthung jingtep kan long kaba duna. ➢ Ki jingheh jong ki jingthung hajan bad shajan ki jaka sah. Ka jingsawa bad khih na ka daw ba pynbthei bad jingtreikam ki machine kin beh ia ki mrad na khlaw bad ki sim na ki skum hajan. ➢ Ki jaka ba kyllum bad ki jaka ba pyniakhlad ki long jah na ki jaka mariang ba kloi ban shah ktah. Te ka jingktah ia ka jinglong jingman jong ka mariang bad ki mrad ka long ba duna. ➢ Ia ka Green belt yn pynroi bad u pud u sam u riew shimet ba ai wai ban long kum ka kynroh na ki jaboh ia ka jinglong jingman ka mariang. ➢ Ka la don ruh ka jingiashimti ia ka jingthung jingtep ha ka lynti iaid kali jong u nongshimwai bad ka surok ba ia snoh lang. ➢ Ka jingpynbthei, pynsawthliew bad jingrah yn pyntreikam tang ha ka por mynsngi ban pynduna ia ka jingktah ia ka jingiaid ki mrad na khlaw. ➢ Baroh ki jingdonkam ban peit ia ka jing jaboh yn shim da u nongshimwai ban pynduna ia ka jingktah ia ka mariang ba ker sawdong.

1.8 KA PROGRAMME NA KA BYNTA BAN PYN NEH IA KA MARIANG

Ka jingpynkhreh ia ka jingmang jong ka pisa na ka bynta ka Programme ban pyn neh ia ka Mariang ka long kumne harum:-

Table 1.10: Provision for Environmental Protection Measures

S. No.	Description	Capital Cost (Rs. In Lacs)	Recurring Cost (Rs. In Lacs)
1.	Environmental Monitoring (Air, Water, Noise and Soil)	--	2.00
2.	Occupational Health and Safety (Initial & Periodical Medical Check-ups)	1.00	0.50
3.	Green Belt (phase wise greenbelt development during plantation plan period)	3.00	0.30
4.	Construction & Maintenance of Settling Tank, Garland Drains etc.	1.00	0.40
5.	Provision of fencing around mine pit	1.00	0.20
6.	Environmental Awareness Program	--	0.75
7.	Rain Water Harvesting	1.00	0.25
8.	Socio EMP	0.40	--
Total		**7.40**	**4.40**

1.9 Ka Jingpynkut:

Ia ka jingpule EIA la leh kat kum ka jingmynjur ka ToR. Ka jinglong jingman bapher jong ka mariang la peit thuh kaba iadei bad ka jingtreikam mining. Ka jingiadei bad ki jingktah la ithuh bad peitshai. Da la peit bha ki lad ki lynti ban ianujor ia ka jinglong jong ka mariang ia ka Environmental Management Plan la pynkhreh bad la buh ka pisa ba donkam. Ka EMP ka la long ba iar, ba jem bad pher man la ka por ba rai biang.

Ka projek kan pynkiew ia ka jingioh nong ia ka State Govt. bad kumjuh kan rah ia ka ioh ka kot jong ki briew shnong. Ka programme pynbha ia ka greenbelt kan iarap ban kham jyrngam shuh shuh ia ki jaka ba marjan. Kumta, ka projek ba la don kan ym ktah ia ka mariang lane ia ka jinglong jingman ki jingthung jingtep ba marjan. Ka Senior Management kan shym khia ia ka jingrai ia ka projek jong ka EMP bad ki jingpyntreikam ban pyntikna ba ka EMP ka long ba treikam bha bad biang. Kumta, ki lad ki lynti badei yn shim ban jop ia baroh ki thong ba la buh ha ka EMP bad ka projek kan sa wanrah ka jingktah babha ha ka jaka pule.

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