DRAFTEIA/EMPREPORT

BAN IOH JINGBIT IA KA ENVIRONMENT CLEARANCE

(Category - B1, under item 1 (a), as per EIA Notification 14th September' 2006 and itssubsequentamendments tilldate)

IA

"GVIL SHALE"

Jaka:-Brichyrnot,ElakaNarpuh,District–EastJaintiaHills,Meghalaya.

Jingpynmihbalah ban pynmih: -1,00,678TPAofROM(Shale:-76,584TPA;
OB: 20,061.6 TPA, Jaboh:-4,032 TPA)
Jingheh ka Jaka: - 4.77Ha;
LOI la ioh ha ka tarik30.01.2020.
Por ba Lease:-25Years(Naka tarik ba register)

Jingtipbniahia ka TOR	**:**	**IssuedfromSEIAA,Meghalayavide letter no. ML/SEIAA/MIN/EJH/P-316/2022/697 dated Shillong, the 17th March, 2023**
Baselinedataba la pynmih	**:**	**December'2022toFebruary, 2023 (Por Tlang)**
ProjectJinglut	**:**	**Rs.21.50Lacs**

PROMOTER

M/s. Green Valliey Industries Limited.
Nongsning,District–
EastJaintiaHills,State–Meghalaya

ENVIRONMENTALCONSULTANT

GaurangEnvironmentalSolutionsPvt.Ltd.
#102,SNGShreeRatnaApartment,PeetalFactory, Jhotwara Road,BaniPark,Jaipur-302016
E-mail:gaurangenviro@gmail.com
NABETAccreditation:NABET/EIA/2023/RA0192(Rev. 01)

KA PASOH

1.0 KA JINGSDANG.

Ka project ba la kdew “GVIL Shale Mine” ka ba don ha Brichyrnot, ElakaNarpuh, District- EastJaintia Hills (Meghalaya). Ka jakabarohba la mangnakabynta kata ka project ka long 4.77 ha. Ka rukomtihia u mar kan long da kabashu khlong ia ka khyndew da ki kor ki bor bad sakabashuksamshapoh. Ka letter of intent la ai ha ka kyrtengjongM/s. Green Valliey Industries Limitedna ka Office jong ka Divisional Mining Officer, West Jaintia Hills District, Jowai vide letter no. DMO-J/ML-MM/1/2019-20/04 dated 30.01.2020 bad lahbuhia ka application na ka bynta ka renewal jongka LOI ha ka 29.07.2021. Ka jakaba la iohjingbitna ka bynta ka mining ka don ka jinghehkumba4.77 ha. Bad ka mineable reserves ne ka jingdon u maw ka long 10,93,658Tonnes ha katto ka jaka, ban pynmih1,00,678 TPA of ROM(Mineral Shale: 76,584 TPA, OB: 20,061.6 TPA & Waste / Subgrade Minerals: 4,032 TPA)

1.1 KYRTENG JONG KA JAKA.

Ka projekba la mang “GVIL Shale Mine” kadon ha Brichyrnot, Elaka, Narpuh , District- Eas Jaintia Hills (Meghalaya).

1.2 KI MAT JONG KANE KA PROJEK.

Sl.No.	Particulars	Details
1.	Kyrtengjong ka Project	GVIL ShaleMine
2.	Jaka	Brichynot,ElakaNarpuh,District– EastJaintiaHills, Meghalaya.
3.	Jing heh jong ka jakana ka bynta kata ka project.	4.77Ha.
4.	Jait Jaka	KhatedariLand(Jaka la jong)
5.	Latitude&Longitude	25°09’28.3”Nto25°09’39.9”Nand 92°24’ 28.1” Eto92°24’ 38.4”E
6.	Ka jingpeitna ka liang ka jingKhynniuh u Jumai	Ka hap hapoh ka Zone – V

1.3 JINGBATAI IA KA PROJEK

Ka Letter of Intent ba la ai iaka M/s. Green Valliey Industries Limited da ka Office of the Divisional Mining Officer, West Jaintia Hills Districtvide letter noDMO-J/ML-MM/1/2019-20/04/ dated. 30.01.2020 iakaba la ai porhaduh u 29.07.2020 bad lahbuhia ka application na ka bynta ka renewal jongka LOI ha ka 04.11.2020. Ka jakaba la mangna ka bynta ka mining ka don ka jinghehkumba4.77 ha. bad ka mineable reserves ne kajingdon u mar ka long 10,93,658Tonnes ha kato ka jaka, ban pynmih1,00,678 TPA of ROM, (Maw – 76,584 TPA, OB: 20,061.6TPA & Waste/Subgrade Mineral: 4,032 TPA). Ka rukomtihia u mawkan long da kabashu khlong ia ka khyndew da ki kor ki bor bad sakabashuksamshapoh bad pynpaitia u maw.

1.4 GEOLOGY

1.4.1 LOCALGEOLOGY

U Maw u paw ha kijakaba la kdew, ymdonshuhkiweikiwei ki maw ba paw ha ka jakaba la mang. U mawshun u la dain ha jan ka Shatei – Shathie bad ngampynieng ha bam don ka jingtreikam. Ym don jingduna, jingkhylliap bad jingthut geological ba la iohi ha kane ka jakaba shim wai. Ka jingwanjong ki maw ha ka jaka shim wai la ai harum:-

Table1.1:LocalGeology

GeologicalAge	GroupName	FormationName	RockType
Recent	NewerAlluvium	Unclassified	Sand, Silt andClay
----------UNCONFIRMITY----------			
Eocene	Jaintia Group	ShellaFormation	Calcareous Shale

1.4.2 PHYSIOGRAPHY

Ka topography jong ka jakaba la kdew ka long khohruhkhohrambaym long madan don ba long lum don ba long madan, Haka jingjrongbajrongtam ka long 444mRL bad haka jingjylliewbashapoh348 MSL. Ka nala ba don ha ka jakaba ka kdew ka long shathie lam shatei.

1.4.3 GEOLOGICALANDMINEABLERESERVES

GeologicalReserve :1,17,79,675MT

MineableReserve :10,93,658 MT

JinglahPynmih : 1,00,678TPA(ROM)

{Mineral Shale: 76584 TPA, OB: 20061.6 TPA &Waste/Subgrade Mineral: 4,032 TPA}

Jingbuhporia ka jingdon u mar :15Years

1.4.4 KARUKOMTIHIAUMARPOHKHYNDEW.

Ka rukomtihia u mawkan long da kabashu khlong ia ka khyndew da ki kor ki bor bad sakabashuksamshapoh bad pynpaitia u maw. Ka jingpyntreikamkan long kat kum ka Mining Plan ba la iohjingbit bad PMCP ka dei:-:-

- Ka rukomtihia u maw kan long da kabashu khlong ia ka khyndew da ki kor ki bor bad sakabashuksamshapoh.
- Ka miedjingjrongynbuh 6m bad jingiarjong ka miedkamdei ban dunaia ka miedjingjrong.
- Barohshiphewmiedynpynbha kata naduh ka level Mied436mRL (Nalormied), 430 mRL, 424mRL, 418mRL, 412mRL, 406mRL, 400mRL, 394 mRL, 388 mRLbad 382mRL (dunamied).
- Ka slope miedkan ai 85°.
- Ka jingrahkan long na ki jakabuh ne ki stocks.

1.4.5 KA JINGTIP JONG KA JINGMIH.

Ka jingpynmihia u maw hapohsansnemkan long katkumba la kdewharum:-

Table1.2:ProductionDetails

Year	ROM(T)	Mineral Shale(T) {A}	OB ** (m^3) {a}	Waste /sub grade (T) {B}	**Remarks	
					OB (T) {C} A x bulk density i.e. 2.4 tons/ cu. Meter	Total ROM (A+B+C)
1stYear	55,824	53,031	26,326	2,793	63,182.4	1,19,006
2nd Year	62,016	58,912	22,022	3,104	52,852.8	1,14,869
3rd Year	68,208	64,795	1,383	3,413	3,319.2	71,527
4thYear	74,424	70,701	27,039	3,723	64,893.6	1,39,319
5thYear	80,616	76,584	8,359	4,032	20,061.6	1,00,678
Total	**3,41,088**	**3,24,023**	**85,129**	**17,065**	**2,04,309.6**	**5,45,398**

1.4.6 KA JING PYNDONKAM IA KA JAKA:

Ka jingpyndonkamia ka jakaba la kdewna ka bynta ban tihia u marpohkhendew ka kynthupia ka jing khlong iakakhyndewba tap najrong, nangtapynpaitia u maw ba la paw hajronghadienba la dep pynkhuidia ka khyndew bad kan long kumba la kdewharum:-

Table1.3: Ka jingpyndonkamia ka jaka:

S.No.	LandUseCategory	Pre-Operational (Ha.)	Operational (Ha.)	Post-Operational (Ha.)
1	TopSoilDump	00	0.01	00
2	OverburdenDump	00	0.10	00
3	Pit & Quarry Area	00	2.52	3.84
	Excavation(VoidsOnly)	00	00	0.84
	Reclamation(Backfilled)	00	00	3.00
4	Road	00	0.02	0.02
5	Infrastructure	00	0.01	0.01
6	Afforestation	00	0.30	0.90
7	MineralStorage	00	00	00
8	Waste/Sub – Grade Stack Yard	00	0.01	00
9	UndisturbedArea	4.77	1.89	00
Total		**4.77**	**4.77**	**4.77**

1.5 KA JINGLONG KA MARIANG:

Ban peitbhaia ka mariangkum ka meterorology, ka lyer, ka um, ka khyndew bad ka jinglongjong ka jingsawa, ki jakapeitbniah la buh ha ki hynriewjaka ha ka jaka ban pule/peitthuh. Ia ka baseline data la shim ha ka portlang(Nohprah' 2019 haduhRymphang' 2021).Ia ka jingbataibniah ha kine ki jaka la ai harum:-

Table1.4:SamplingLocation

SamplingLocation	Distance (Km)	Direction	Components
Mine Site	--	--	Air, Water, Noise, Soil
Sialkan	6.0 Km	NE	Air, Water, Noise, Soil
Khaddum	3.8 Km	ESE	Air, Water, Noise, Soil
Sunapyrdi	6.3 Km	SW	Air, Water, Noise, Soil
Tongseng	3.9 Km	WSW	Air, Water, Noise, Soil
Lumshnong	4.0 Km	WNW	Air, Water, Noise, Soil
Near Star Cement Industry	2.4 Km	WNW	Air, Water, Noise, Soil

1.5.1 KA JINGLONG JINGMAN KA JAKA.

1.5.1.1 Ka Jinglong ka khyndew:

Ki symbohkhyndew la shim na ki hynriewjaka bad ha ka jingpaitbhaia ka jingshong ka khyndew ka long harum:

pH	:	7.55–8.09
TotalOrganicMatter	:	1.27–1.65(%bymass)
NitrogenasN	:	23.8–35.4(mg/100gm)
PhosphorusasP	:	0.67 –0.82(meq/100gm)
PotassiumasK	:	0.67 –0.89 (mg/kg)

1.5.1.2 Ka JinglongJingmanjong ka Um:

Ki um na ki hynriewtylli ki jaka ban pule la shim. Ka jingiohiia ka jingtohkit la pyniharum:-

Table1.6:WaterQuality Status

S.No.	Parameter	Unit	Acceptable Limit	Permissible Limit	Mine Site	Sielkan	Sunapyrdi	Tong seng	Lums nang	Near Star Cement Boundary	Khaddum
Organoleptic & Physical Parameters											
1.	Colour	Hazen Unit	5	15	<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	NTU	1	5	<1.0	<1.0	<1	<1	<1.0	<1.0	<1
5.	pH value	-	6.5-8.5	-	7.21	7.43	7.08	7.12	7.37	7.76	7.22
6	Total Dissolve Solid (TDS)	mg/l	500	2000	380.0	356.0	420.0	308.0	429.0	378.0	319.0
General Properties											
7	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8	Total Ammonia	mg/l	0.5	No Relaxation	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
9	Anionic surface Detergents(as MBAS)	mg/l	0.2	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
10	Barium (as Ba)	mg/l	0.7	No Relaxation	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
11	Boron (as B)	mg/l	0.5	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
12	Calcium(as Ca)	mg/l	75	200	58.12	57.50	60.12	62.08	62.20	64.98	58.20
13	Chloramines (as Cl2)	mg/l	4.0	No Relaxation	<1.0	<1.0	<1.0	<1.0	<1.00	<1.00	<1.0
14	Chloride (as Cl)	mg/l	250	1000	19.40	16.23	12.06	15.50	12.69	18.81	16.84
15	Copper (as Cu)	mg/l	0.05	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
16	Fluoride(as F)	mg/l	1.0	1.5	0.36	0.32	0.24	0.36	0.47	0.27	0.33
17	Free Residual Chlorine	mg/l	0.2	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
18	Iron (as Fe)	mg/l	0.3	No Relaxation	0.132	0.141	0.136	0.125	0.170	0.141	0.129
19	Magnesium (as mg)	mg/l	30	100	5.40	8.21	10.04	7.23	10.37	12.35	4.08
20	Manganese (as Mn)	mg/l	0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.1
21	Mineral Oil	mg/l	0.5	No Relaxation	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
22	Nitrate (as NO_3)	mg/l	45	No Relaxation	0.27	0.32	0.25	0.28	0.45	1.23	0.32

23	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
24	Silver (as Ag)	mg/l	0.1	No Relaxation	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
25	Sulphate (as SO_4)	mg/l	200	400	25.40	28.21	26.16	25.40	25.37	32.67	28.14
26	Sulphide(as H_2S)	mg/l	0.05	No Relaxation	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
27	Alkalinity(as Ca CO_3)	mg/l	200	600	198.0	192.0	186.0	193.0	172.0	180.0	196.0
28	Total Hardness (as $CaCO_3$)	mg/l	200	600	165.0	154.0	168.0	172.0	155.0	176.0	182.0
29	Zinc (as Zn)	mg/l	5	15	0.155	0.142	0.136	0.140	0.164	0.149	0.161
Parameters Concerning Toxic Substances											
30	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
31	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
32	Phenol	mg/l	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01
33	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
34	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05
35	Molybdenum (Mo)	mg/l	0.07	No Relaxation	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
36	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
37	Poly nuclear Aromatic	mg/l	0.0001	No Relaxation	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.05	<0.05
38	Poly chlorinated biphenyl	mg/l	0.0005	No Relaxation	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Microbiological Parameters											
39	*Escherichia coli*	/100ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	
40	*Coliform Bacteria*	/100ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	

1.5.2 JinglongJingmanjong ka Lyer:

Ban peitbhaia ka jinglongjong ka lyer ha ka jaka pule ka systematic ambient air quality monitoring la pyniaidia ki jaitjingjaboh (PM_{10}, $PM_{2.5}$, NO_X, SO_2 and CO) ha ki hynniewjakaba don ki ambient air quality monitoring stations.

1.5.2.1Jinglong ka Lyer

Ka Ambient air quality monitoring la pyniaidshakhmat ha ka porarsienshitaiew ha ki phrajaka ha kaweika aiom kata naduhNohprah' 2022 haduhRymphang' 2023. Ka jingiohiia ka jinglongjong ha baroh ki jaka ki long kumneharum. Iakine la pyniahap kat kum ka jingbuh da ka Central Pollution Control Board (CPCB) jong ka rural bad residential zone.

Table1.7:AmbientAirQualityStatus

S. No	Sampling Location		Parameters				
			PM_{10} (µg/m^3)	$PM_{2.5}$ (µg/m^3)	SO_2 (µg/m^3)	NO_x (As No_2) (µg/m^3)	CO (mg/m^3)
1.	Mine Site	Min	59.47	24.98	11.87	13.24	0.38
		Max	69.56	32.12	15.89	19.6	0.96
		Avg.	61.76	26.06	13.44	15.68	0.57
		98th% ile	69.10	30.59	15.53	19.22	0.85
2.	Sialkan	Min	50.20	18.07	8.98	9.88	0.36
		Max	59.57	21.45	11.69	18.62	0.77
		Avg.	54.61	19.66	9.80	13.37	0.55
		98th% ile	59.10	21.28	11.30	17.10	0.77
3.	Khaddum	Min	38.5	11.5	3.93	5.25	0.47
		Max	46.7	20.92	6.18	8.29	0.59
		Avg.	42.52	15.88	5.25	6.80	0.53
		98th% ile	46.26	20.54	6.11	8.26	0.59
4.	Sunapyrdi	Min	51.20	18.43	10.36	12.32	0.37
		Max	57.12	20.56	14.45	20.55	0.68
		Avg.	53.38	19.22	12.04	15.31	0.54
		98th% ile	55.86	20.10	14.44	19.93	0.66
5.	Tongseng	Min	53.4	19.21	9.74	10.96	0.35
		Max	65.8	24.77	10.65	15.4	0.54
		Avg.	57.17	21.14	10.14	11.82	0.45
		98th% ile	65.38	24.61	10.65	14.81	0.54

6.	Lumshnong	Min	59.28	31.56	9.23	15.62	0.39
		Max	74.65	45.12	18.56	20.31	0.58
		Avg.	66.36	38.65	13.87	18.74	0.47
		98th% ile	73.18	44.52	17.74	20.17	0.58
7.	Near Star Cement Industry	Min	55.41	22.65	9.58	12.45	0.35
		Max	70.61	27.58	11.3	16.39	1.75
		Avg.	62.14	24.00	10.26	14.01	1.14
		98th% ile	70.09	27.24	11.27	16.15	1.75
NAAQS, For 24 hourly monitoring (except CO for Eight hour)			**100**	**60**	**80**	**80**	**2**

1.5.3 JinglongJingmanJongkaJingsawa.

Ka jingthewia ka jingsawa la pyniaid ban tip bhaia ka jinglong ka jingsawa ha ki hynriewjaka ban pule. Ka jingthewia ka jingsawa ha man ki jaka la shim ha 24 kynta. Ka jingiohiba la ioh la pyniahap bad ka national standards bad la shemba long kat kum ka standard. Ki data ba la ioh la pyniharum:-

Table1.8:AmbientNoiseLevelStatus

Location	Date of Sampling	Day Time (6.00 AM to 10.0PM)	Night Time (10.00 PM to 6.00 AM)
Mine Site	08.12.2022	58.9	44.2
Sialkan	24.12.2022	51.8	39.5
Sunapyrdi	05.12.2022	50.0	41.0
Tongseng	04.01.2023	53.2	42.2
Lumshnong	18.01.2023	54.1	40.6
Near Star Cement Boundary	23.01.2023	56.8	43.2
Khaddum	01.02.2023	52.5	38.5
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 jingiohjingkotjong ki briew:

Ka jaka pule ka kynthupia16tylli ki shnongBrichyrnot, ElakaNarpuh, District- East Jaintia Hills District(Meghalaya) hapoh 10 km ka jakasawdongna ka mine.

Table1.9:DemographyProfile oftheStudyArea

S. No.	Particulars		Details
1.	No. of Villages		16
2.	Total Population		10,683
	a.	Male	5,371
	b.	Female	5,312
3.	No. of Households		1,816
4.	No. of Literates		5126
	a.	Male	2360
	b.	Female	2766
5.	Main Workers		2927
	a.	Male	2010
	b.	Female	917
6.	Marginal Workers		867
	a.	Male	412
	b.	Female	455
7.	Non-workers		6889
	a.	Male	2949
	b.	Female	3940

(Source:Census,2011)

1.5.5 Jingmih ha ka Mariang:

Buffer Zone
Flora
Climber – 19 Specie
Herb – 40 Species
Shrubs - 70 Species
Tree – 74 Species
Fauna
Amphibian – 17 Species
Fish - 16 Species
Avifauna– 92 Species
Butterflies – 28 Species
Mammals– 27 Species

1.6 Ka Jingtreikam bad ka Jingtehlakamia ki Jingma:

Ka jingpeitia ka jingma ka dei ka jingpuleba dap da ka jingbymtikna bad mad jingma ha ki katnokatne ki jaka. Ban peitngoria ka jingma ka dei ban ithuhia ki jingmabaiadei bad ka jingpyntreikam mining, bad ban sgewthuhkumno bad hangnoynshem bad ianujoria ka jingkynduh (ha ka pisa lane ha kiweikiwei) ha ka jingmih. Ka pyni bad nujoria ki jingmaia ki riewshimet, ki kam bad government agencies balah ban iohna ka mariang lane da ki jingjia ki briew.

Tangba kin don hi kattokatne ki dawkibalah ban pynlongkaba ma ha ki portreikam/jingmaham ha batihia u maw (minor minerals). Ia ki jaitjingma la pynithuhportihmawshun bad la pyniharum:-

1. Ba mynsawporpynkiew, pyniaid bad bretia u maw.
2. Ba mynsaw da ka dawbaiaid kali
3. Ba rung um

Ban pyniaidbhaia ki kam ki jam, ki jingkdewharumyn bud na ka bynta ban iadana ki mynsaw ha ka mine.

Step 1: Ki jingïitia ki jingmabaktahna ka jingpynjot

Step 2: Ki jingïitia ki briewba don ha ka jingma

Step 3: Ki jingwengnohia ki jingjulor

Step 4: Ka jingtipbniahna ka bynta ka jingma

Step 5: Ki lad ban iadabaiadei ban shim

Step 6: Ban buhjingkhein

Step 7: Ban peitbiang

1.7 Ka Jingpynkreh bad ban tehlakamna ka jingjotjongkaMariang(EMP):

Impact	MitigationMeasures
Jinglong bad ka jingpynkhrehna ka bynta Jaka	
Ka khyndewkansajulornamarbatih bad bretia ki jaboh.	➢ Ka jingkyllum ban tihia ka thliewkan long 3.84 ha na ka 0.84, ynpyndonkamkum ban buh um 3.00 ha. ynpyndapkhyndew, ban kambiang bad pynbhadakathungjingthung.
Jinglong bad ka jingpynkhrehna ka ban ympynjabohpynjakliaia ka um Um	
Ban pyllaitia ki um jakhliana ka Jaka Trei. Ka jingiakynduh ka um khyndewporpyntreikam ha ka jingtih.	➢ Kan nym don jingpyllaitum jakhliana ka jakatih. Jaka tih(0.84 ha.) kan long kum ka jakabuh um. ➢ Kat kum ka Mining Plan ba la shim bad ka PMCP, ka jinghehjong ka pit (334MSL) kan long hajrong ka um khyndew bad kanymkynduh.
Jinglong bad ka jingpynkhrehna ka ban ynympynsniewLyer	
Pumpumkan her portih, por rah bad pynhiar. Ki lyerjaboh kin bhanabaiaid kali.	➢ Ia ki kali baiaid ha ka jakatreikamynshna bad peitbha ban buh ka jingmihlyerhapoh ki adong. ➢ Ha jakapynhap bad pynkiew bad ki lyntiiaid, ynpynbuh um ban pashaid ban pynduna ka jingmihpumpum. ➢ Ha ban pyrthuhia ka jingkylla ha ka jinglongjong ka lyer, AERMOD version 8.8.0 model la pyndonkam.Ka baheh tam bapynkiewia ka jingkhlehkhyndew PM_{10}& $PM_{2.5}$, bad lyerjaboh NO_X& CO na ki bapher ki jakabatih ha ka por pule (tlang) la iohiba ka long 4.03897µg/m^3,3.00038µg/m^3, 0.04616µg/m^3bad0.000013mg/m^3. ➢ Ki jingmihkaniai don hapoh ka National Ambient Air Quality Standards na ki bynta ki kharkhana/ jakasahbriew.
Jinglong bad ka jingpynkhrehna ka byntaJingsawa	
Jingsawana ka dawba leh mining Jingsawana ka dawbaiaid kali.	➢ Ka jingsawanabaroh ki jaka ka long man ka por bad hatangportreikam ➢ Ka jingthewia ka jingsawaba la shim data ha ka jaka ka long hapoh ka adongjong ka National Ambient Noise Quality Standards ➢ Ka jingdonjong ka jingsawa ka long duna ha kane ka jakaba la kah ki lum ki wah/bashna kali.

Ka JingiohJingkotne Ka Jingiarapna ka bynta ki Briew	
➢ Jingiohkam ➢ Jingpeitbniahiakajingkoitjingkhiah ➢ Jaka ai pule	➢ Ka jingtreikam mining kamktah than ia ka jingiohjingkot ki briew ➢ Kam don jingkynriah(0)ha ka jakaba la mang ban leh mine. ➢ Kumba25ngut ki nongshongshnong kin ioh lad treikamryngkat bad ka jinghikai man ka por ban pyntbit ki sap bapher. ➢ Ki rukombathymmaiban aikam/iohpisaynsaiohpynmih. ➢ Ka jingpeitia ka jingkoitjingkhiah man ka por da ki health camp. ➢ Ka jingiarapskul bad ioh scholarship ia ki khynnahyn ai.
Jingmih ha ka Mariang	
➢ Jingktahjong ka jingkylla ha jinglongjingmanjong ka mariang ➢ Ki mrad bad ki jingthung ki ban shah ktah.	➢ Ka jingpyntreikamia ka mining kan don ka jingktahbajurbhaia ki mrad bad jingthungjingtep. Ka jinglongjong ka projek ka long ban iarapia ki jingthungjingtep ha ka jakaba la thmu. ➢ Ki jingthungjingtepba don ha ka jaka mining ki long ki dieng bad sanium. Kin nym shah pynthudna ka daw ka jingpyntreikam mining. Te, ka jingktahia ki jingthungjingtepkan long kabaduna. ➢ Baroh ki jingdonkam ban peitia ka jingjabohyn shim da u nongshimwai ban pyndunaia ka jingktahia ka mariangbakersawdong. ➢ Ki jinghehjong ki jingthunghajan bad shajan ki jakasah. Ka jingsawa bad khihna ka dawbapynbthei bad jingtreikam ki machine kin behia ki mradnakhlaw bad ki sim na ki skumhajan. ➢ Ki jakabakyllum bad ki jakabapyniakhlad ki long jahna ki jakamariangbakloi ban shah ktah. Te ka jingktahia ka jinglongjingmanjong ka mariang bad ki mrad ka long baduna. ➢ Ia ka Green belt ynpynroi bad u pud u sam u riewshimetba ai wai ban long kum ka kynrohna ki jabohia ka jinglongjingman ka mariang. ➢ Ka la don ruh ka jingiashimtiia ka jingthungjingtep ha ka lyntiiaid kali jong u nongshimwai bad ka surokbaiasnoh lang. ➢ Ka jingkitia u mar kan long ha ka porsngikhnang ka kanynympynwitia ki jingimba don sha marjan. ➢ Baroh ki kyndonba la buh da ka pollution control measure kin hap ia bud.

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

Ka jingpynkhrehia ka jingmangjong ka pisana ka bynta ka Programme ban pynnehia ka Mariang ka long kumneharum:-

Table1.10:ProvisionforEnvironmentalProtectionMeasures

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)	3.75	1.0
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	--	0.50
7.	Rain Water Harvesting	1.00	0.25
8.	CER	0.43	--
Total		**8.18**	**4.85**

1.9 Ka Jingpynkut:

Ia ka jingpule EIA la leh kat kum ka jingmynjur ka ToR. Ka jinglongjingmanbapherjong ka mariang la peitthuhkabaiadei bad ka jingtreikam mining. Ka jingiadei bad ki jingktah la ithuh bad peitshai. Da la peitbha ki lad ki lynti ban ianujoria ka jinglongjong ka mariangia ka Environmental Management Plan la pynkhreh bad la buh ka pisabadonkam. Ka EMP ka la long baiar, bajem bad pher man la ka porba rai biang.

Ka projekkanpynkiewia ka jingiohnongia ka State Govt. bad kumjuhkan rah ia ka ioh ka kotjong ki briewshnong. Ka programmepynbhaia ka greenbelt kaniarap ban khamjyrngamshuhshuhia ki jakabamarjan.Kumta, ka projekba la don kanymktahia ka mariang lane ia ka jinglongjingman ki jingthungjingtepbamarjan. Ka Senior Management kanshymkhiaia ka jingraiia ka projekjong ka EMP bad ki jingpyntreikam ban pyntiknaba ka EMP ka long batreikambha bad biang. Kumta, ki lad ki lyntibadeiyn shim ban jopiabaroh ki thong ba la buh ha ka EMP bad ka projekkansawanrah ka jingktahbabha ha ka jaka pule.

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