

**EXECUTIVE SUMMARY
OF
ENVIRONMENTAL IMPACT ASSESSMENT
AND
ENVIRONMENTAL MANAGEMENT PLAN**

For

**KHUB LIMESTONE MINE
OVER AN AREA OF 9.66 HECTARES
IN LUMSHNONG VILLAGE, EAST JAINTIA HILLS
MEGHALAYA**

Prepared For

**CEMENT MANUFACTURING COMPANY Ltd.
VILLAGE LUMSHONG, EAST JAINTIA HILLS DISTRICT
MEGHALAYA**

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EXECUTIVE SUMMARY

1. JINGBATAI IA KA PROJECT

Ka jing shim wai tihmaw naka bynta ka Lumshnong mawshun project jongka Khub ka jaka kaba 9.66 ha. (kynthup lang) la ai da ka sorkar meghalaya lyngba ka shithi MG.98/2008/23 (LOI) tarik 01.04.2009 ia ka M/s Cement Manufacturing Company Limited kaba long ka public limited kompani. Ka jaka project ka dei ka jaka shimet. Ymdon khlaw ha kane ka jaka. Ka jingtihmaw kan long katkum ki rukom tihpar bad ka Progressive Mine Closure plan bala shah da ka Indian Bureau of Mines(IBM). Ka jingtihmaw na ka bynta 2013-14 haduh 2014-15 la phah sha ka IBM jong ka sorkar India haka 20/02/2014. ka SEIAA jong ka meghalaya kala ai ia TOR ban pynmih haduh 8, 50,000 MT katkum na ka report ba ladeq phah. Ia u mawshun jongkane ka par yn pyndonkam haka karkha shna dewbilat jong ka kompani. Ka Cement Manufacturing Company Ltd (CMCL) ka ba laioh ISO 9001:2000 bad la pynlong iaka ka Public Limited Company haka 2nd November 2001 bad ka ophis treikam bala register ha ka shnong Lumshnong, East Jaintia Hills district Meghalaya da ka sorkar Meghalaya ha u snem 2002 bad ruh kaba lashah hadien ban nangpynneh shuh ka jingpynmih haduh 3000TPD ha ka snem 2003. mynta ka jingpynmih ka long 2400TPD ka clinker/debilat.

Ka jingtyrwa ban seng karkhana dewbilat ka long halor ka jing report ia ka jingdon bun umawshun u babha sawdong ka shnong Lumshnong daka Geological Survey of India bad ka Directorate of Mineral Resources, Govt of Meghalaya.

Ka cement plant ka pynmih 2400TPD lyngba ka dry process kaba thang da u dewiong. Ki bynta jong ka par kilong jingpynmadan is ka khyndew da ki buldozer → drilling → blasting → pynkit ha kali da ki Hydraulic Excavator → kit da ki kali TATA Hyva sha plant → Thew ha weigh bridge → theh ha jaka buhmaw ha plant → thew biang iaka kali ha weigh bridge → leit phai sha parmaw.

Ka Cement Manufacturing Company Limited (CMCL) ka tyrwa ban pyniasoh lang ia ki artylli ki jaka tihmaw kaba 4.96 bad 4.70 hectares kaba don ka khyndew kaba 0.24 ha hapdeng markhap ba pyniakhlad iaki. Kine ki jaka kidon ha Lumshnong, District East Jaintia hills, Meghalaya. Ki latitude bad longitude jong kane ka jaka project ka long 25° 9'48" to 25° 10'4.3"N & 92° 22'05.3" to 92° 22'23.6"E ka kompani ka la dep ban pan jingbit na ka SEIAA, Meghalaya. Haka 24.04.2013 ka SEIAA kala ai ia ka TOR

Ka Jaka tihmaw (dur. 1)

Jylla	Meghalaya
District	East Jaintia hills
Shnong	Lumshnong
Ka Jaka	9.66 ha
Toposheet No.	83C/W
Latitudes	25° 9'48" to 25° 10'4.3"N
Longitudes	92° 22'05.3" to 92° 22'23.6"E
Ka kynjang	520 m AMSL to 546m AMSL

Ymdon lynti surok ne lynti rel ba iaid na kane ka jaka. Kane ka par ka don kum ba 1km sepngi jong ka NH-44 kaba leit shillong – silchar. Ka stationn rel kaba jan tam nangne na Lumshnong ka long kumba 85km ka Badarpur kaba iaid na guwahati-Lumding-silchar meter gauge jong N.E.F.

Railway(**dur.2**). Ka map jong kane ka par ka don ha ka **dur.3**. Ka jinglong kane ka jaka bad ki sawdong jongka ki long ki ba riat bad lum bha. Ki jingthew ia ka jinglum jongka ki long 546m bad 520m bad ka graters relief kaba 20m. Ka shathie-phangsepngi jongka ka kham long lum shuh shuh ka kynjang ban ia ka shathie-phangmihngi. Ka airport ka jan tam ka don ha silchar ka jingjngai kaba 125km bad ka guwahati ka ba 211km nangne na Lumshnong. Ymdon National Park, Wildlife sanctuary ne kiwei pat ki jaka ba kumkine hapoh 10km na kane ka jaka.

Katkum ka mining plan reserves ba la phah ka long kune:

(in million tonnes)

Category	Khub-I	Khub-II	Total
Jingkhein jingdon maw(331)	6.05	5.40	11.45
Jingdon maw ba thikna(111)	3.33	2.82	6.15

Katkum na ka jingksam ia ki maw ha kane ka par ia ki jinglong (grade) jongki maw la buh jingkhein la ka jong.

Ia kane ka par yn tih ha ka rukom jongka opencast da ka ba pyndonkam tang da ki mashin tangkawei ka shift.ki mashin/kali kumki crawler drill, air compressor, hydraulic excavators, dumpers etc., yn pyndonkam. Ia u mawshun yntih da kab shu ksam bad pynbhei. Ia kine kimaw yn pynkit da ki truk dumper/tipper bad exavator. Ia ka jingheh bad iar ka kynjang tihmaw hapoh par kan long 6meter la 12meter. Ka slope jong ka kynjang kan long 45⁰ katba ka slope kyllum jongbaroh kawei kane ka thliew par ruh kan long 45⁰. ka jingpynmih ia u mawshun kanlong 8,50,000TPD. Katkum na kane ka jingpynmih yn pyndonkam ia kane ka par haduh 20 snem lynter. Ka jinglut na kabynta kane ka project kan long 675Lak. Yn ymdon jakhlia ki ban pynmih na kane ka par.

2. JINGBATAI IA KA MARIANG

Ki jinkhein ba iadei bad ka mariang kum ka jingshit jingkhriat bad jingsngem haka lyer la ioh ha kipor ba lumjingtip bad wadbniyah. Kajingshit jingkhrait ka long 6.3⁰C haduh 25.7⁰C katba ka jingsngem ka lyer ka long 62.0% haduh 95.0% hadien ka aiom slap. Ka jinghap slap kyllum ha Shillong ka long 2415.3 mm katba kisngi hap slap kilong 129.1. katba Ka jinghap slap kyllum ha Silchar ka long 3213.7 mm katba kisngi hap slap kilong 132.6. ka jingbeh kyllum kalyer ka long na shaphang shathie. Ka **dur.4** ka pyni ka ba iadei bad ka lyer. Ka nuksa jong ka jaka ba ka par ka don ka don ha ka **dur.5**

ki jingkhein jongka CPCB na ka bynta nong kyndong bad jaka sah briew ka PM₁₀, PM_{2.5}, SO₂, NO_x bad CO (24 kynta) ka long 100, 60, 80, 80 and 2000 µg/cum. Ngi la dep shim bad wadbniyah ia ka jingman jong ka lyer na ki phra ki jaka ha ka shi aiom. Ka jingmih na ka ne ka jingwadbniah ki long kumne harum. Ngi ladep wad bniah ia baroh ki bynta bad la shem ba baroh ki long hapoh katkum ka jingkhein katkum bala ai da ka CPCB.

The CPCB value for rural and residential areas for PM₁₀, PM_{2.5}, SO₂, NO_x and CO (24 hourly) are 100, 60, 80, 80 and 2000 µg/cum respectively. We had taken various ambient air quality datas from eight stations for minimum one season. The analysis results are presented as follows. We had tested all the parameters as prescribed by CPCB but all the parameters found below the permissible limit in the study area, so we had not given them in tabular form.

Zone	Station Code	Station	Value of	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Core zone	A1	Mine Site (4.96 Ha.)	MAX	63.5	35.7	19.3	22.6
			MIN	42.3	23.8	12.5	15.5
			AVERAGE	52.90357	31.16786	15.475	18.14643
			95 PERCENTILE	59.35	34.06	18.3	21.3
Buffer zone	A2	Mine Site (4.70 Ha.)	MAX	62.3	37.1	18.5	28.1
			MIN	44.8	29.9	13.1	16.1
			AVERAGE	54.96071	33.98214	15.8	19.25357
			95 PERCENTILE	59.9	36.8	19.8	24.5
	A3	Umlaper	MAX	44.4	26.9	12.8	15.7
			MIN	54.41071	33.02143	16.725	20.46429
			AVERAGE	59.765	36.665	19.355	23.795
			95 PERCENTILE	59.765	36.665	19.355	23.795
	A4	Tongseng	MAX	68.8	43.8	19.3	20.8
			MIN	54.7	28.3	13.3	15.7
			AVERAGE	61.34286	34.20357	16.56071	18.81429
			95 PERCENTILE	67.76	39.485	18.695	20.565
	A5	Umlong	MAX	61.5	48.6	21.7	23.6
			MIN	50.4	30.4	11.4	14.3
			AVERAGE	56.47857	35.71786	15.33929	17.61111
			95 PERCENTILE	61.06	39.98	20.085	21.35
	A6	Umbadoh	MAX	62.6	40.5	20.8	23.4
			MIN	52.8	30.5	11.2	10.2
			AVERAGE	59.00714	36.70357	16.24643	14.775
			95 PERCENTILE	62.155	40.165	20.1	18.33
	A7	Lumshnong	MAX	61.3	40.8	20.8	20.5
			MIN	42.5	22.7	10.3	16
			AVERAGE	53.46071	32.475	16.75357	18.75357
			95 PERCENTILE	60.66	39.255	20.6	20.43
	A8	CMCL Plant site	MAX	58.5	35.7	20.8	25.7
			MIN	47.5	27.4	15.1	16.7
			AVERAGE	53.63929	32.38929	18.44643	21.97857
			95 PERCENTILE	58.12	35.12	20.23	24.96

Ka jingsawa na ki kali baiaid ka long ka wei ka ba pynthud bha ha ka por wad bniah. Ka jingsawa ki sur ka long 43.4 haduh 66.5 dBA ha ka por sngi bad ka por miet ka long 40.2 haduh 46.7 dBA. Ki jingsawa ha kine jaka jong ka par ki long hapoh u pud katkum ka jingthew.

The vehicular movements are the main noise source during the study period. The noise level data are varying from 43.4 to 66.5 dBA in the day time and in the night it varies from 40.2 to 46.7 dBA. The noise level of the area is within the prescribed limit.

Ka jingdong ka um ha poh kyndew ha ka shisnem ka long kumba 2.3184 Ham katba ka lebel ka um shapoh khyndew ka long 420m AMSL (por shit) bad 425 AMSL (por lyiur). Ka jinglong jong ka um shapoh bad halor khyndew ka biang katkum ka jingthew jong ka Inland Surface Water, class-A, IS 3025 bad IS 10500.

Jingkhein ba la ioh na ka bawad bniah iaka um.

Parameter	Unit	Standard	Surface Water Samples			
			SW ₁	SW ₂	SW ₃	SW ₄
pH	---	6.5 - 8.5	6.7	6.6	6.8	6.8
Colour	---	Colourless	Colourless	Colourless	Colourless	Colourless
Odour	----	Odourless	Odourless	Odourless	Odourless	Odourless
Total solid	mg/l	----	228	236	241	236
Total suspended solid	mg/l	----	15	14	15	16
TDS	mg/l	1500	227	219	224	217
Oil and Grease	µg/l	----	0.04	0.06	0.03	0.04
Dissolve oxygen	Mg/l	----	5.8	6.3	5.7	6.5
Total kjeldahl nitrogen as N	mg/l	----	5.1	4.7	4.8	4.4
Ammoniacal nitrogen as N	mg/l	50	0.84	0.67	0.62	0.77
Free ammonia as NH ₃	mg/l	----	<0.1	<0.1	<0.1	<0.1
BOD	mg/l	3	0.3	0.5	0.7	0.9
Arsenic as As	mg/l	0.2	<0.01	<0.01	<0.01	<0.01
Mercury as Hg	mg/l	----	<0.005	<0.005	<0.005	<0.005
Lead as Pb	mg/l	0.1	<0.005	<0.005	<0.005	<0.005
Total chromium as Cr	mg/l	2.0	<0.1	<0.1	<0.1	<0.1
Hexavalent Chromium as Cr	mg/l	0.05	<0.01	<0.01	<0.01	<0.01
Copper as Cu	mg/l	3.0	<0.02	<0.02	<0.02	<0.02
Cadmium as Cd	mg/l	0.01	<0.002	<0.002	<0.002	<0.002
Zinc as Zn	mg/l	5	<0.002	<0.002	<0.002	<0.002
Selenium as Se	mg/l	0.05	<0.005	<0.005	<0.005	<0.005
Nickel as Ni	mg/l	3.0	<0.01	<0.01	<0.01	<0.01
Boron as B	mg/l	2.0	<0.05	<0.05	<0.05	<0.05
Cyanide as CN	mg/l	0.05	<0.01	<0.01	<0.01	<0.01
Chloride as Cl	mg/l	600	27	29	25	22
Nitrate as NO ₃	mg/l	50	0.7	0.5	0.9	0.8
Flouride as F	mg/l	1.5	<0.1	<0.1	<0.1	<0.1
Dissolved PO ₄	mg/l	5.0	0.4	0.2	0.3	0.4
Sulphate as SO ₄	mg/l	400	12	17	16	18
Sulphide as S	mg/l	2.0	0.8	0.5	0.4	0.3
Iron as Fe	mg/l	5.0	0.6	0.7	0.5	0.4
Silica as SiO ₂	mg/l	----	<0.01	<0.01	<0.01	<0.01
Phenolic compound	mg/l	0.005	<0.0001	<0.0001	<0.0001	<0.0001
Residual pesticide	mg/l	Absent	Absent	Absent	Absent	Absent
Sodium Percentage	mg/l	60	<0.05	<0.05	<0.05	<0.05
Calcium as Ca	mg/l	74	22	27	29	24
Magnesium as Mg	mg/l	32	8	7	5	9
Total hardness	mg/l	298	82	76	91.7	128
Coliform cells/100ml	MPN	BDL	Absent	Absent	Absent	Absent

Standard : IS 2296, Class – A, Inland Surface Water
 ND: Not detected
 Surface water sampling stations:-
 S1: Nalla near ML area S2- Wah Larian N. S3- Nalla near Lumshnong S4- Nalla near Plant site

Result of Surface Water Samples Analysis

Parameter	Unit	Standard	Surface Water Samples		
			W ₅	W ₆	W ₇
pH	---	6.5 - 8.5	6.7	6.6	6.9
Colour	---	Colourless	Colourless	Colourless	Colourless
Odour	----	Odourless	Odourless	Odourless	Odourless
Total solid	mg/l	----	263	214	217
Total suspended solid	mg/l	----	14	16	13
TDS	mg/l	1500	248	217	209
Oil and Grease	µg/l	----	0.04	0.07	0.08
Dissolve oxygen	Mg/l	----	4.7	4.9	5.2
Total kjeldahl nitrogen as N	mg/l	----	3.1	3.3	3.5
Ammoniacal nitrogen as N	mg/l	50	0.74	0.71	0.82
Free ammonia as NH ₃	mg/l	----	<0.1	<0.1	<0.1
BOD	mg/l	3	0.1	0.1	0.2
Arsenic as As	mg/l	0.2	<0.01	<0.01	<0.01
Mercury as Hg	mg/l	----	<0.005	<0.005	<0.005
Lead as Pb	mg/l	0.1	<0.005	<0.005	<0.005
Total chromium as Cr	mg/l	2.0	<0.1	<0.1	<0.1
Hexavalent Chromium as Cr	mg/l	0.05	<0.01	<0.01	<0.01
Copper as Cu	mg/l	3.0	<0.02	<0.02	<0.02
Cadmium as Cd	mg/l	0.01	<0.002	<0.002	<0.002
Zinc as Zn	mg/l	5	<0.002	<0.002	<0.002
Selenium as Se	mg/l	0.05	<0.005	<0.005	<0.005
Nickel as Ni	mg/l	3.0	<0.01	<0.01	<0.01
Boron as B	mg/l	2.0	<0.05	<0.05	<0.05
Cyanide as CN	mg/l	0.05	<0.01	<0.01	<0.01
Chloride as Cl	mg/l	600	27	25	28
Nitrate as NO ₃	mg/l	50	0.8	0.7	0.5
Flouride as F	mg/l	1.5	<0.1	<0.1	<0.1
Dissolved PO ₄	mg/l	5.0	0.3	0.4	0.6
Sulphate as SO ₄	mg/l	400	15	17	12
Sulphide as S	mg/l	2.0	0.5	0.3	0.4
Iron as Fe	mg/l	5.0	0.6	0.7	0.8
Silica as SiO ₂	mg/l	----	<0.01	<0.01	<0.01
Phenolic compound	mg/l	0.005	<0.0001	<0.0001	<0.0001
Residual pesticide	mg/l	Absent	Absent	Absent	Absent
Sodium Percentage	mg/l	60	<0.05	<0.05	<0.05
Calcium as Ca	mg/l	74	27	29	23
Magnesium as Mg	mg/l	32	10	8	5.4
Total hardness	mg/l	298	102	94	87
Coliform cells/100ml	MPN	BDL	Absent	Absent	Absent

Standard : IS 2296, Class - A, Inland Surface Water
 ND: Not detected
 Surface water sampling stations:-
 S5:Nalla near Tongseng S6- Nalla near Umlong S7- Nalla near Umbadoh

Kane ka jaka ka long lum bad ki khlaw ba long ever green bad deciduous. Ki jingthaw ba im kum ki mrad ki long ki mrad/khniang ba par, ki sim, amphibians, khniang bad kyndiat ki mrad kum ki khnai siej, risang, kshih, khnai iing, shrieh. Ki jingthung ne mrad ba kham phylla ne ba long endengered kim don ka kine ka jaka.

3. KI JINGKTAH BALAH BAN KTAH IA KA MARIANG BAD KI JINGIADA IA KA MARIANG

Ka kam tihmaw ka lah ban pynmih ia ka jingmyntoi bad ruh iaka jingktah ia ka mariang. Ki rukom jingiada ia ka mariang ka ba mih na kane ka jingtihmaw la wad bad pynshong nongrim da kaba pyndonkam da ka 'Matrix'

ka jingmyntoi ba kane ka kam tih par kan wan rah ha ka shnong ka thaw ki long ka jingkoit jingkhiah, ka jingdon briew, jingiohkam iohjam, ka thoh ka tar bad kiwei kiwei. Kane ka jingtihmaw kan pynmih ka jingiohkam ia kumba 100 ngut ki briew beit na ka kompani bad kumba 90 ngut lyngba kiwei pat. Ka leit ka wan, lynti syngkieng, jingpule, jingsumar, ka light bad ki lad rukom ioh kam iohjam kin khambha.

Man la ki bynta ka jingtihmaw kan pynmih ia ki pumpum bad ki lyer ba sniew. Da ka ba pynshong nongrim ha lor ka jingiar ka jaka bad ki ain ba iadei bad ka mariang la khmih lynti ba ki jingktah kan long kat kum ba la mang. Ki wei pat shuh shuh ki rukom ban pynduna ia ka jingktah ka long ban ksam ia u maw khleh bad ka um, synreit um bad thung da ki dieng ban pynduna ia ka jingktah ha kine ki jaka.

Ka jingtuid khyndew ha ki um kan long namar ba ka um ka tuid khamtam ha ki por slap bad ki phngit ba per. Kum ba la mang ban shna ia ka tangki ban kynjiar bad kah iaki nala sawdong ka par ban pynduna ia ka jingpynjaboh ia ka um kat kum ki jingthew.

Ka jingtngit ha ka um ba tuid ka lah ban pynmih ki jingpang ha kane ka jaka. Ia ka um yn hap ban pynkhuid shwa. Ki lad jingsumar yn pynbiang kat kum ka jingdonkam. Ka jingktah ia ka um kaba shapoh khyndew kan long khyndiat namar ba ka jaka tih maw hapar ka long kham ha jrong ka kynjang na ba don ka um.

Namar ka ne ka opencast project ka jingsawa ha kane ka area na kaba ksam maw, pynbthei, pynkit bad jingiaid ki mashin kan mih. Ki rukom pynbthei babiang, jingsumar biang ia ki mashin bad ki soundproof cabins bad jingthung dieng kin pynduna ia ki jingsawa.

Jingthung da ki dieng haka jaka ka pynduna ia ka jingktah ia kiwei pat ki jingthung. Ka rukom pyndonkam ia kane ka jaka kan long kumne harum (**Dur.3**).

Existing Core Zone Land use Pattern

Classification of land	Village/District	Total area in Hects.
Total Private Land (non-forest)	Lumshnong/East Jaintia hills	9.66 Waste land

Proposed Land Pattern (Area in Ha.)

Sl. No.	Pattern of Utilisation	Existing	Planned 5 years	Beyond 5 years	Total
1.	Area to be excavated ML area 4.96Ha &- ML area4.7Ha.	7.17	0.42	0.5	8.09
2.	Storage for top soil	Nil	Nil	Nil	Nil
3.	Overburden/dump	Nil	Nil	Nil	Nil
4.	Mineral Storage	Nil	Nil	Nil	Nil
5.	Infrastructure (Workshop, administrative building)	Nil	Nil	Nil	Nil
6.	Roads	Nil	Nil	Nil	Nil
7.	Railways	Nil	Nil	Nil	Nil
8.	Green Belt	Nil	Nil	Nil	Nil
9.	Tailing pond	Nil	Nil	Nil	Nil
10.	Effluent Treatment Plant	Nil	Nil	Nil	Nil
11.	Mineral Separation Plant	Nil	Nil	Nil	Nil
12.	Township area	Nil	Nil	Nil	Nil
13.	Others to specify	Nil	Nil	Nil	Nil
	Sub-Total	7.17	0.42	0.5	8.09
14.	Safety zone (7.5 ML boundary)	---	---	---	1.57
	Total	7.17	0.42	0.5	9.66

Post-Operational Land Pattern (Area in Ha.)

Sl. No.	Pattern of Utilisation	Existing	Planned 5 years	Beyond 5 years	Total
1.	Area to be excavated ML area 4.96Ha &- ML area4.7Ha.	7.17	0.42	0.5	8.09
2.	Storage for top soil	Nil	Nil	Nil	Nil
3.	Overburden/dump	Nil	Nil	Nil	Nil
4.	Mineral Storage	Nil	Nil	Nil	Nil
5.	Infrastructure (Workshop, administrative building)	Nil	Nil	Nil	Nil
6.	Roads	Nil	Nil	Nil	Nil
7.	Railways	Nil	Nil	Nil	Nil
8.	Green Belt	Nil	Nil	Nil	Nil
9.	Tailing pond	Nil	Nil	Nil	Nil
10.	Effluent Treatment Plant	Nil	Nil	Nil	Nil
11.	Mineral Separation Plant	Nil	Nil	Nil	Nil
12.	Township area	Nil	Nil	Nil	Nil
13.	Others to specify	Nil	Nil	Nil	Nil
	Sub-Total	7.17	0.42	0.5	8.09
14.	Safety zone (7.5 ML boundary)	---	---	---	1.57
	Total	7.17	0.42	0.5	9.66

Ka jingthungdieng hakane kaja kan long kumne harum:

Stage Wise Cumulative Plantation

Jingdonkam dieng banthung										
Year	Un-worked Area (Greenbelt)		Out Side Dump		Dump Area		Top Soil Dump		Total	
	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Tree
1st	0.5	1250	--	--	--	--	--	--	0.5	1250
2nd	1.0	2500	--	--	--	--	--	--	1.0	2500
3rd	1.5	3750	--	--	--	--	--	--	1.5	3750
4th	1.57	3925	--	--	--	--	--	--	1.57	3925
5th	1.57	3925	--	--	--	--	--	--	1.57	3925
Ultimate	1.57	3925	8.09	20225	--	--	--	--	9.66	24150

Ka jingpyndynkam ia kane kaja hadien ba lasdang ka jingtihmaw (**Dur.6**)

kane ka jaka kamlong bha ban thung ban tep. Da ka ba pyndonkam ia kane ka jaka haka ba tihmaw kan pynmih ka jingiohkam iohjam bad jingiohnong.

4. KI PROKRAM BAN PEIT IA KA MARIANG

yn sa buh ia ki nongpeit pyrman ki ban peit pynbiang ia ka jinglong ka mariang kum ka lyer, ka um, ki jingsawa, jinglong ka khyndew bad ha ki jaka marjan ba shong sah briew. Kat kum na ka jingdonkam ba la ai da ka MSPCB yn shna bad buh saw jaka kum ki station baneh naka bynta ban wad ia ka AAQ man la kipor ba la buh. Man kapor ynshim bad wad bniah ia ka jinglong ka um. Ka jingpeit ba ia dei bad ka jingsawa yn buh ha ki jaka ba pynmih ia ka jingsawa bad ka jaka AAQ yn saleh man la kipor.

5. KI WEI PAT KI JINGWAD JINGTIP

ki wei pat ki jingwad jingt看 shuh shuh kum ka jingt看/jingtwa khyndew bad jingdon nutrient ha ka um yn sa leh.

6. JINGMYNTOI NA KA PROJECT

ia u mawshun ba mih nagne yn pyndonkam ha karkhana kane ka kompani. Kane ka project tihmaw bad ka karkhana shna dewbilat kan pynbha ia ka imlang sahlang, ka jingnang jingstad bad ki rukom jingim ki nongshong shnong. Ka ne ka project ruh kan pynmih ka jingiohnong ia ka sorkar jylla bad sorkar kmie.

7. KA PLAN BAN IADA IA KA MARIANG

ka jingtihmaw kan don ka jingktah ia ka mariang kum ka lyer, um, khyndew bad jingsawa. Ban iada na kine ki jingktah kine harum ki long ki rukom ban iada:

- Ban thung ia ki jait dieng (ba iar ki tnat bad rben sla) ba lah ban tan bad iada na ki jingsawa, jingtuid khyndew, ba lah ban pynsboh ia ka khyndew.
- Ban khang ia ki pum pum ba her, da kaba synreit um, dust extractor bad kiwei kiwei ha ka jaka ba ki mih.
- Ka ba pyntrei kam ia ka rukom control blasting (da ka ba pyndonkam da ki non-electric detonator).
- Ban shna ia ka nala sawdong ka par ha ka rukom ka ba biang.
- Ka tanki ban kynjiar khyndew ka jingheh ka ba biang.
- Ka um batuid na ki nala bad ki duid barit yn pyn tuid lang ia ki sha ka pung ban jiar shwa ban pyntuid shawah shabar ka par.
- Ki jingsumar ba biang ia ka karkhana bad ki mashin.
- Ka ba buh ia ki sound proof cabins ka ba biang ki jingkhang ban rung lyer.
- Ka ba pyndonkam ia ki personal protective equipments katkum ka jingdonkam.
- Ka nala ban shna da ki kynroh maw ban bad bad jiar noh ia ki khyndew ba tuid bad ka um.
- Ka ba buh ia ki speed breaker man la ki jaka ha kane ka nala.
- Ban pynjyngam ia ki jaka byndon khlaw da ka ba thung dieng.

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