

Environmental Impact Assessment of Expansion of Limestone Opencast Mining from 2.0 MTPA to 5.0 MTPA Project of Lafarge Umiam Mining Private Limited: *Village Nongtraï, District East Khasi Hills, Meghalaya*

Environmental Consultant: ERM India Private Limited, Gurgaon- NABET Accredited as per certificate No. NABET/EIA/1316/RA007 Valid Up to December 19, 2016



Executive Summary (in Khasi)

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KA EXECUTIVE SUMMARY JONG KA ENVIRONMENTAL IMPACT ASSESSMENT STUDY JONG KA PROJEK BA THMU BAN PYNHEH IA KA JINGTIH MAWSHUN NA KA 2.0 MT SHI SNEM SHA KA 5.0 MT SHI SNEM, HA NONGTRAI, EAST KHASI HILLS, MEGHALAYA.

A) Ka Jingsdang

- 1) *Ka Lafarge Umiam Mining Private Limited (LUMPL), ka kompani ba la seng ha India kum ka Kompani ba pura jong ka Lafarge Surma Cement Ltd (LSC) jong ka Bangladesh, ka la seng ia ka jingtih mawshun ha Meghalaya, India ka ba dei ka jingtih bad jingshalan mawshun tang na ka bynta ka kharkhana shna dewbilat jong ka LSC ha Bangladesh. Ki kynhun Lafarge Group, France⁽¹⁾, Cementos Molins, Spain, Islam Group, Bangladesha bad Sinha Group, Bangladesh ki long ki kynhun ba nyngkong eh ban ai buit bad bei tyngka na ka bynta ban tih mawshun ha ka par hangne ha ri India ryngkat ruh bad ka karkhana dewbilat ha Bangladesh bad ruh la bei tyngka da ka International Finance Corporation (IFC- Ka Group World Bank), Ka Asian Development Bank (ADB), German Development Bank (DEG), European Investment Bank (EIB) bad Ka Netherlands Development Company (FMO).*
- 2) *Ka jingtrei par mawshun ha Nongtraï Limestone Mine la sdang da ka Kompani Lum Mawshun Minerals Pvt. Ltd. (LMMPL), ba la seng ha u snem 1994 hapoh jong ka Indian Companies Act, 1956. Ka Foreign Investment Promotion Board jong ka India (FIPB) ha u snem 1998 ka lah ai jingbit ia LSC ba bei 74% ia ka equity capital jong ka LMMPL. Ar ngut ki trai mluk ki bat 26% ki equity shares. Ka LMMPL ka la ioh ia ka hok ban shim wai bad ban tih mawshun ha ka par Nongtraï. Baroh ki jingbit (license) ba la pynbiang da ka LMMPL la aiti noh sha Ka LUMPL kum ka Kompani ban pyntrei kam. Ka FIPB ruh ka la ai jingbit ia ka LSC ban seng ka Kompani ba pura (kata ka LUMPL) ban pyniaid ka ki kam tih mawshun ka ban neh shyrt.*
- 3) *Ka LUMPL ka dang pyntrei kam ia ka jingtih mawshun kat kum ki kyndon ba la ioh ha ka jingbit na ka bynta ban pynmih 2.0 million tonne shi snem. Ka rukom pyntrei ka long ban pynpra ia u mawshun sha ka size (-) 80 mm bad sa phah lyngba ka jingpyniaid mawshun ba la thaw da u kynja belt ba jrong 17 km sha ka kharkhana shna diwibilat ha Chattak, Bangladesh. Ka par mawshun ha Nongtraï jong ka ri India bad ka karkhana dewbilat kaba don ha Bangladesh la seng ia ki hapoh ka jingiateh soskular/ jingiapynbeit hapdeng ka sorkar jong ka ri India bad Bangladesh.*

B) Ka jaka ba don ka par tih mawshun

- 4) *Ka jaka kaba la shim wai ban tih mawshun ka hap hapoh ka Shnong Nongtraï, Block Mawsynram, ka Hima Shella, East Khasi Hills District, India. Ka jaka tih ka don sha ka bynta ba sha trai jong ka lam shathie ka ranab Meghalaya ha East Khasi Hills markhap bad ki bynta madan ka Bangladesh. Ka par kaba la shim wai ka heh kumba 100 hectare (Ha) bad ka don hapdeng Latitude (ka pynkiang) 25°11'17.40"N haduh 25°11'49.90"N bad Longitude (ka pynieng) 91°36'52.10"E haduh 91°37'29.20"E kumba la pyni ha Figure 0.1. U dak khappud hapdeng ka ri India bad Bangladesh u don ha ka jingjngai kaba 1.5 km (na ka jakatih kaba jan tam) na ka bynta kaba shathie jong ka par mawshun.*
- 5) *Ka par mawshun ka don 15 km (katkum ka jingthew kaba la thew nalar suin) shathie lam Sepngi jong ka Sohra (Cherrapunjee) (ka shnong kaba jan tam) bad 14 km (katkum ka jingthew kaba la thew nalar suin) na Mawsynram. Na sor Shillong, ban poi sha ka par lah ban iaïd lyngba na ka surok rong kaba poi sha ka iew Shella lyngba Sohra (Cherrapunjee) kaba jngai kumba 96 km, bad sa iaïd kjat lyngba ka jingkieng doïdoi sha shiliang ka Wah Umiam. Lah ruh ban iaïd lyngba na ka surok PWD Shillong – Mawsynram – Nongtraï kaba long ka surok rong kaba jngai kumba 110 km.*
- 6) *Ka shnong Nongtraï ka don sha ka bynta Shatei – Shatei lam Sepngi, kumba 2.5 km (katkum ka jingthew kaba la thew nalar suin) bad ka iew Shella ka don sha Mihngi, kumba 1.5 km (katkum ka jingthew kaba la thew nalar suin). Ka shnong Phlangkaruh (kaba long ka shnong barat jong ka shnong Nongtraï) ki don kumba 1.0 km lam Shathie bad Shatei lam mihngi jong ka par. Ka shnong Pyrkan ka don 1.4 km Shathie lam mihngi jong ka par.*

(1) Recently, in July 2015, Lafarge and Holcim groups merged to form LafargeHolcim

- 7) Ym don park ne jaka ri mrad khlaw hapoh 10 km pyllun ka par. Kat kum ki jingtip ba la wad bniah, kane ka jaka ba don ka par kam dei ka jaka sah/ ka lynti ia id jong ki kynja mrad khlaw kiba kyrpang ne ba don jingma ban duh jait.

C) Ki Jingiohjingbit ba iadei bad ka Projek.

- 8) Ka LMMPL ka lah ioh ia ka jingbit ban shim wai na ka bynta ban tih mawshun ha ka jaka kaba heh kumba 100 ka ban pyntreikam haduh 30 snem (naduh Kyllalyngkot 03, 2002 haduh Kyllalyngkot 02, 2032), ia kaba lah aiti noh sha ka LUMPL ha u Rymphang 28, 2002 lyngba ka ka jingiateh kaba iadei bad ka jingia aiti jaka.
- 9) Ia ka Environmental Clearance la ai sha ka LMMPL da ka MoEFF ha u Nailar 09, 2001 na ka bynta ba tih mawshun kumba 2.0 million ton shi snem(MTPA).Ia kane ka Environmental Clearance la aiti noh na ka LMMPL sha ka LUMPL da ka MoEF⁽¹⁾ ha u 30 tarik u Naitung, 2002 bad ka MoEFka la pynbeit ruh ia ki katto katne ki bynta jong kane ka Environmental Clearance ha u 19 tarik u Iaiong, 2010.
- 10) Ha u 30 tarik, Iaiong, 2007, U Chief Conservator of Forests (CCF), Regional Office MoEFCC, Shillong u la pynia hap ia ka Projek area kum ka "khlaw" (deemed forest), bad lah hukum ba pynsangeh shi syndon ia ki kam tih mawshun baroh halor ka nongrim ba khlem pat ioh Forest Clearance hapoh ka ain Forest (Conservation) Act, 1980. Mar mar hadien ba la ioh ia ka hukum, ka LUMPL ka lah pynsangeh lut ia baroh ki kam ha kiba iadei bad ka jingtih mawshun, bad ka la ai dorkhas sha ka Forest Clearance katkum ka Kyndon 2 jong ka Forest (Conservation) Act, 1980 ha u bnai Jymmang 2007. Ha u bnai Jylliew 2007, ka LUMPL ka la ai dorkhas sha ka Hon'ble Supreme Court (ka iingbishar kaba heh duh jong ka ri) jong ka India, ha IA no. 1868 hapoh ka Writ Petition (C) No. 202 jong u 1995 ban kyrpad ban kham pynkloi ia ki kam kiba iadei bad ka dorkhas jong ka Forest Clearance.
- 11) Ha u Iaiong 22, 2010 ka MoEFCC, halor ka jingaijingmut jong ka Sorkar jylla, Forest Advisory Committee (FAC) bad Central Empowered Committee (CEC), ka la pynmih bad la ai ia ka Stage-I Forest Clearance sha ka LUMPL.
- 12) Ha u 06, Naitung, 2011, ka Hon'ble Supreme Court (ka iingbishar kaba heh duh jong ka ri) ha ka rai [IA 1868 of 2007 in WP (C) No. 202 of 1995] ka la ong...." Katkum ka hukum kaba la ioh na ka iingbishar ha ka 12.12.1996, ka jylla Meghalaya ka la thung ia kawei ka Expert Committee lyngba ka jingpyntip kaba la ioh ha u 8.1.1997 ha kaba u Principal Chief Conservator jong ka tnat Forests u la long u nongpyniaid (Chairman) . Ha ka 10.2.1997, ka Jylla Meghalaya ka la phah shithi kyrpang sha ka Khasi Hills Autonomous District Council, kumba la batai halor ba ka dei ka Constitutional Authority, ha kaba la batai ba kata ka jaka kam dei ka jaka khlaw bad la bthah ia ka District Council ban pynshai ba kata ka jaka kaba la ioh jingbit ban shim wai na kass bynta ban tih mawshun ka hap ne em hapoh ka jaka khlaw kat kum ki rekord ba don bad ka Council. Ka Council lyngba ka shithi ba la phah ha ka 28.4.1997 ka la pyntip sha ka Sorkar jylla ba kata ka jaka kam shim hap hapoh ka jaka khlaw. Halor kane ka shithi, U nongpyniaid (Chairperson) jong ka Expert Committee ba la thung da ka Jylla Meghalaya uba long ruh u Principal Chief Conservator jong ka tnat Forests u la ai ia ka report ha kaba la batai shai ba kata ka jaka kaba ka Sorkar Jylla ka la ai jingbit ban wai na ka bynta ban tih mawshun kam shim hap hapoh ka jaka khlaw. Namar ba kane ka jaka kaba la ioh jingbit ban wai na ka bynta ban tih mawshun kam shim hap hapoh ka jaka khlaw, kumta ka Sorkar Jylla kam shim lah phah dorkhas sha ka Sorkar Kmie katkum ka kyndon 2 jong ka Ain 1980, namar ba la shim ba kane ka jaka ka hap shabar ka jaka khlaw. Dei hadien 9 (khyndai) snem eiei ba ka MoEF ka la kylla jingmut halor ka report jong ka Expert Committee ba la lam khmat da u Principal Chief Conservator of Forests. Hapdeng ki snem 1997 bad 2007, la pdiang ba ka jaka par ka hap shabar jong ka jaka khlaw."
- 13) Katba dang ap ia ka rai jong ka case IA no.1868 in WP (C) 202 of 1995 da ka Hon'ble Supreme Court(ka iingbishar kaba heh duh jong ka ri), ka MoEFCC lyngba ka order F.No.07-31/2007 jong u 30 tarik lber, 2015 ka la thung ia kawei ka komiti hapoh ka jingialam jong u B N Jha, CCF, RO Shillong bad ia ka report la phah da ka MoEFCC sha ka Hon'ble Supreme Court(ka iingbishar kaba heh duh jong ka ri). Shi bynta jong ka report ka ong, "...Katkum ka report, ka M/S Lafarge ka la leh bun ki kam bhalang ban pynioh jingmyntoi ia ka shnong bad ia ki trai shnong da kaba siew bai wai na ka bynta ba pyndonkam ia ka jaka shnong. La batai ruh shaphang ka dor jong u mawshun uba khaii nangne sha Bangladesh. Ia kine ki jingsiew la batai ha kane ka report. La ong ruh ba ka jingtih mawshun kam shim don jingktah kaba sniew ia ka jingim briew bad kano kano ka jing duh lah ban pynduna lyngba ka Bio-

(1) Recently Ministry of Environment and Forest has been renamed as "Ministry of Environment, Forests and Climate Change" (MoEFCC). Accordingly, in this document, new acronym of MoEFCC has been used as against the earlier used acronym of MoEF.

Diversity Management Plan bad ka Catchment Area Treatment Plan ka ba la pynkhreh bad pyntrei kam na ka por sha ka por...

- 14) *Kat kum ki jingkdew jong ka Hon'ble Supreme Court (ka iingbishar kaba heh duh jong ka ri) lyngba ka hukum (order) kaba la pynmih ha u 26 tarik, Iaiong, 2010, ki report ba la ai da ki bor bapher ba pher lem bad ka jingkohnguh ia ki kyndon bapher bapher ba la buh da ka MoEFCC (kaba kynthup ruh ia ka jingsiew jong ka compensatory afforestation, penal compensatory afforestation bad NPV lem bad ka sut), la buh ha khmat ka Expert Appraisal Committee ha u 29 tarik, Jylliew, 2010 bad u 21 tarik, Naitung, 2010. Kat kum ki jingiakren ba la ia mynjour ha ka Expert Appraisal Committee, ki kyndon bad ki lad jingiada mariang ba la buh da ka MoEF ha ka por ba la ai ia ka environmental clearance ha 9.8.2001 bad 19.4.2010 ki la batai shai bha kumno ban ioh jingiada na kino kino ki jingpynjutor na ka daw ka projek bad ban ioh jingiada ia ka mariang lyngba ka jingpyntreikam bha ia ki. Ka Hon'ble Supreme Court (ka iingbishar kaba heh duh jong ka ri) ka la peit bniah biang ia kane ka environmental clearance ha kaba ka lah khmih bha bad hun ia ki mat ba la kynthup bad yn nym don ba artatien ba ka MoEF kam shim lah leh shiliang bad ba la peit ngor bha haba ka rai ban ai ia ka Stage-I forest clearance bad pynkylla ia ka environmental clearance. Ka Hon'ble Supreme Court ha ka rai ka la pynksan ia ka Environmental Clearance ba la ai ka LUMPL da ka MoEFCC ha u 9 tarik, Nailar, 2001 kynthup lang bad ka Environmental Clearance kaba la dep pynkylla ha u 19 tarik Iaiong, 2010 bad Stage-I Forest Clearance ha u 22 tarik, Iaiong, 2010.*
- 15) *Ka Hon'ble Supreme Court (ka iingbishar kaba heh duh jong ka ri) ka ai hukum ban seng ia ka Special Purpose Vehicle (SPV) hapoh ka jingpyniaid u Chief Secretary (u shongknor) bad kane ka SPV ka dei ban ia id katkum ki kyndon jong ka ain kaba la pynmih na bynta ban pyndonkam ia ka pisa-tyngka kaba ioh na ka CAMPA. Ka tnat Accountant General jong ka jylla Meghalaya ka hap ban peit ia ka jingiakhien-iadiah ia ka pisa-tyngka. Yn thep ruh ia kane ka pisa sha ka Nationalised Bank khnang ban ioh pyndonkam ia ka sut ka ban sa ioh na kane ka bank. Ka jylla Meghalaya ha kaba ia dei bad ki kam pynbha pynmiat ha ka liang ka jing iiad shaphrang ka koit ka khiah, ka pule uthi, ka jing ioh jingkot, ki kam pynpoi um sha ki lyngkha bad jaka rep hapoh u pud u sam 50 km pyllun ia ka par mawshun. Kane kan long kyrpang tang na ka bynta ki briew shong shnong jong kita ki jaka bad ki riew lum. Ka LUMPL kan kynshew ha ka SPV ha ka dor 90/- tyngka shi tonne u mawshun ba lah dep tih naduh ka por ba ka la sdang pyntreikam.*
- 16) *Ha u 29 tarik, Naitung, 2011, ka MoEF ka la pynmih kawei ka shithi ha kaba ka la ai jingbit ban nang pyntreikam ia ka jingtih mawshun katba dang ap ia ka Stage II Forest Clearance. Ka MoEF ka la ai ia ka Stage II Forest Clearance ha u 29 tarik, Rymphang, 2012 ia ka LUMPL na ka bynta ban iohpyndonkam 116.589 Ha jong ka jaka khlaw na bynta ka Nongtraí Limestone Mine bad kiwei kiwei pat ki kam kiba iahap bad ka jingtih mawshun.*

D) Ka jingpyntreikam ia ka projek

- 17) *Ka LUMPL ka don ka jingthmu ban pynheh ia jingtih mawshun na ka 2.0 million tonne shi snem sha ka 5.0 million tonne shi snem na ka par kaba la pyntrei lupa kaba don 100 Ha ha ka jaka kaba la ioh ban shim wai na bynta ban tih mawshun ha Nongtraí. Ia u mawshun ba la pynpra yn shalan sha Bangladesh lynba ka Long Belt Conveyor (LBC) sha ka karkhana shna dewbilat ka LSC ha Bangladesh. Ban lah ban shalan mawshun kham bun kumba thmu, yn hap pyndait da ki kor thymmai ha ka LBC bad pynthymmai ruh ka rukom pyntrei.*
- 18) *Ka jingdonkam dewbilat ha Bangladesh la khmih lynti ba kan nang kiew kumba 8% ha ki 5 snem ban wan ka ban iahap bad ka jingkieu ka ioh ka kot ha ka jingshongdor kaba 6% haduh 6.5 % ha Bangladesh. Ym don par mawshun ha Bangladesh bad ia ka dewbilat la pynmih da katto katne ki karkhana tylliat (grinding unit) da kaba wan rah u clinker shalan. Da kaba pynheh ia jing pynmih mawshun, ka LSC kan lah ban kham ioh shuh ka bhah ha ka ieu dewbilat, kaba mynta ka long 7.5%.*
- 19) *Ka jinglut na ka bynta ban pynheh ia ka jing pynmih mawshun lah antad ba kan kot sha ka 194 klur tyngka (ha ka dor ieu 2014-15) kaban kynthup ia ka jingbei pisa na ka bynta ka jingmih tдем (Pollution Control) ka Mariang (Environment), ka koit ka khiah (Health) bad ki kam ba iadei bad ka jinghusiar ha jingtrei (Safety). Lah mang ruh 2.1 klur tyngka na ka bynta ki kam ba ia dei bad ki jingkhmih bniah (monitoring) bad ka jingkein-jingdiah (auditing) ha ka liang ba iadei bad ka jingiada ia ka mariang.*

(E) Ka jingdonkam ia ka jingpule bad jingtip ia ka EIA

- 20) Ka jingtih ia ki marpoh khyndew kiba hap hapoh ka bynta 1(a) (i) (na ka bynta ka kyrdan A jong ka Projek) Schedule jong ka EIA Notification 2006 (ba la kham pynjanai) donkam shwa ka Environmental Clearance na ka MoEFCC, Sorkar India katkum ka jingshem kaba la ioh ynda la dep khmih bniah katkum ki kyndon ba la buh da ka Expert Appraisal Committee (EAC) (Mining) kaba hap hapoh ka MoEFCC. Ban ioh ia ka Environmental Clearance hap pynkhreh ia ka EIA Study na ka bynta ka jingthmu ban pynheh ia ka jingpynmih mawshun (na ka 2.0 million ton shi snem sha ka 5.0 million ton shi snem) kat kum ki kyndon ba la mynjur da ka Expert Appraisal Committee (EAC) (Mining) kaba hap hapoh ka MoEFCC, lyngba ka shithi ba lah pynmih ha u 30 tarik, Iaiong, 2013, ba la pynskhem ha ka EAC Meeting ha u Lber, 16-18 tarik, 2015 na ka bynta ka por haduh 29 tarik, Iaiong, 2016. Ia ka EIA Study la pynkhreh na ka bynta 10 km pyllun ia ka par mawshun.

F) Jingbatai shapang ka Projek

F.1 Ka jingbatai shapang ka par bad ka jingpyntreikam ia ka jingtih mawshun

- 21) Ka jaka kaba 139.026 Ha (ia kaba 116.589 Ha la kdew ba ka dei ka jaka khlaw) ba la wai/thied da ka LUMPL na ka bynta ka projek kaba dang pyniaid, kata ba pynmih mawshun 2.0 million ton shi snem kan long ka juh na ka bynta ban pynmih mih mawshun 5.0 million ton shi snem (kaba lah tip hangne kum ka Projek ne ka Projek ba thmu pynheh). La pynneh ia ka jinglong khlaw kaba 100m baroh shi lynter ka par katkum ka jingdonkam jong ka Environmental Clearance ba la ai da ka MoEF na ka bynta ka jingpynmih 2.0 million ton shi snem. Yn ym donkam jaka thymmai na ka bynta kane ka jingthmu ban pynheh ia ka jingmih.
- 22) Ka jinglong sharing ka par ka long na 70 m haduh 186m (kaba lah iapher 70m haduh 190m shurwa ban sdang tih mawshun) bad ka long ruh ka jaka ba ioh slap jur bha (7,680 millimeitar (mm) shi snem naduh 2010 haduh 2014). Ka jingjur u slap, ka jing sharing ka jaka bad ka jing long u mawshun ka la pynlong ia ka par bad ki jaka sawdong 'Karstified'. Ka par kam don maw khia bad u mawshun uba don u long uba bit ban pyndonkam ban shna dewbilat. Kat kum ka jingthmu ba tih balah mynjur (2013-2018) da ka IBM na ka bynta 5.0 million ton shi snem, u mawshun ba lah ban pyndon kam u long 132.57 million ton. Ka par lah ban pyntreikam ne tih kumba 27 snem naduh u snem 2015 lane 24 snem naduh 2017-2018 ha kaba pyntrei kam ban pynmih 5.0 million ton shi snem.

F.2) Ka rukom tih mawshun

- 23) Ka jingtrei mynta ban pynmih mawshun 2.0 MT shi snem la leh da kaba pyndonkam da ki kynja tiar karkhana (mechanized opencast mining method), bad yn bteng da kane ka juh ka rukom na ka bynta ban pynmih 5.0 MT shi snem hapoh ka jaka kaba la shim wai bad kaba don 100 Ha. Yn pyndon kam da ki juh hi ki rukom kata ban sam thliw (drilling), ban pynbthei (blasting), ban pynpra (breaking), ban kit (loading), ban rah (hauling), ban pynpra shuh sha ka jingthwew ba kham rit (crushing) ban sha shalan (transportation) lyngba ka LBC.
- 24) Na ka bynta ka jingpynheh ia kane ka projek tih mawshun, ka jingsam thliw ha ki kyndon kan long kat kum ka jingpynmih da kaba pynbiang ia ka jingjngai kawei na kawei ka thliw 2.5 m x 3.0 m, jingheh kawei pa kawei ka thliw kan long 110 mm bad ka jingjylliew kaban long 11 m (kaba kynthup ia 1m na ka bynta ka jingsam thliw lane sub grade drilling). Yn pyndonkam ruh da ki kor ba thymmai ban lah ban sei mawshun ha ka rukom kaba dei.
- 25) Yn ym don jingpynbthei arsien (secondary blasting), hynrei yn pyndonkam da ki kor (hydraulic rock breakers) ban pynpra shuh shuh ia u mawshun uba lah dep pynpra lupa na bynta ka jingpynmih mawshun kaba 5.0 MT shisnem.
- 26) Yn ym don jingmih jakhlia namar ka par hi baroh kawei kam don da kiwei ki jait maw lait na u mawshun. Ka don khyndiat ka khyndew nalar ha kaba yn pyndonkam ha kiwei ki jaka ba thmu ban thung jingthung. Ka don ruh ka sem ba shna kyrpang tang ban pynlang ia ka khyndew ba mih na ka jingtih mawshun.

F.3) Jaka buh jingpynbthei

- 27) Ka don ka jaka buh jingpynbthei bad ka jaka buh jong ka ammonium nitrate kaba kyrpang ba la ioh jingbit na ka PESO. Yn ym pynkylla ia kane ka jing buh ia ki jingpynbthei ne ammonium nitrate ha kaba iadei bad ka jingpynmih mawshun 5.0 MT shisnem.

F.4) Jingtyllyiat mawshun

- 28) Na ka bynta ka jingpynmih mawshun kaba long 2.0 million ton shi snem, la pyndonkam da ka kor tylliat kaba lah ban pynmih 800 ton shi kynta na 400mm sha (-) 80 mm.. Na ka bynta ka jing thmu ban pynmih 5.0 million ton shi snem, yn pyndonkam da ka kor tylliat ba thymmai (impactor lane kano kano ka kor kaba ia syriem bad ka) kaba lah ban pynmih 1,500 ton shi kynta (ba lah shu buh kylluid 1,260 ton shi kynta) bad ia kane yn pynshong markhap bad ka kor tylliat kaba lah don lupa na ka bynta ban pynmih 95%(-) ha ka jingthew kaba 80mm. Ia u pui pui u ban mih ha ka por tylliat ia u mawshun yn pyndonkam da ka Dust Supression System (dry fog type).

F.5) U kor pyntuid ne shallan mawshun (Long Belt Conveyor)

- 29) Ban shalan ia u mawshun ba la dep tylliat, yn pyndonkam da ka Long Belt Conveyor na ka bynta ban tih mawshun 2.0 million ton shi snem, bad ka jingkit ba 800 ton shi kynta man ka sngi bad ka jingkhia ba lah mang ban kit kata 960 ton shi kynta ha ka jingstet kaba 4.0 minit shi sekhon. Na ka bynta ka jingpynmih mawshun ba 5.0 million ton shisnem yn pynkiew shuh shuh ka jingkit sha ka 1260 ton shi kynta man ka sngi bad jingkhia ba lah mang ban kit kata 1385 ton shi kynta ha ka jingstet 6.0minit shi sekhon da kaba pynthymmai ia katto katne ki kor jong ka belt conveyor.

F.6) ka jingbatai shaphang ki jingtei

- 30) Na bynta ka jingpynmih mawshun kaba 2.0 million ton shi snem, ki don ki iing ophis (mine office complex), ki iing trei (workshop) bad kiwei kiwei ki jaka treikam. Na ka bynta ban pynmih 5.0 million ton shi snem u mawshun, kijuha ki building bad ki kor yn pyndonkam katba ki building bad ki kor yn hap kynriah, bad kata kan long hadien 15 snem ter ter hapoh ka jaka kaba lah pyntreikam.

F.7) Ka jingpynbiang ia ki jingtbeh jingshai

- 31) Na bynta ka jingpynmih mawshun kaba 2.0 million ton shi snem, la pynbiang ia ki jingtbeh jingshai (lighting) ha ki jaka ba pher ba pher jong ka par. Ha ka jaka ba buh jing pynbthei lah pynshai da kaba pyndonkam da ka bor jong ka sngi (solar lighting). Ka LUMPL ka la pynbiang ia ki jingtbeh jingshai kiba lah pyndait kham hajrong shaphang sha mihngi khnang ban ioh jingshai lang baroh kawei ka par. Ynda lah pynheh ia ka jingpynmih mawshun sha ka 5.0 million ton shi snem, yn pyndonkam da kijuha hi ki rukom pynshai ha ki jaka trei bad ha ka jaka ba pyntkit mawshun.

F.8) Ka jingthung nongtreikam

- 32) Na bynta ka jingpynmih 2.0 million ton shi snem u mawshun, ka LUMPL ka la thung 547 ngut ki nongtrei kiba kynthu ia ki trai shnong Nongtrai , Shella bad kiwei ki shnong ba marjan. Na ka bynta ban pynheh ia ka jingpynmih mawshun ka jingthungam ka long baroh 629 ngut (jingthungkam direct bad kontrak).

F.9) Ka por trei

- 33) Na bynta ka jingpynmih mawshun 2.0 million ton shisnem, ka rukom pyntrei ka long ha ka jingbujli nongtrei arsien shisngi ha ka hynriew sngi shi taiew. Ynda lah pynheh ia ka jingpynmih mawshun sha ka 5.0 million ton shi snem, yn bujli nongtrei lai sien shisngi ha ka hynriew sngi shi taiew.

F.10) Ka jingdonkam ia ka bor elektrik ban pyniaid ia ki kor treikam

- 34) Na ka bynta ban pynmih 2.0 million ton shi snem u mawshun, ka jingdon kam bor elektrik ka long 2.0 megawatt (MW), ka ba la pynmih lyngba ka generator diesel kaba 1,250 kVA. Na ka bynta ban pynmih 5.0 million ton shi snem u mawshun la khein ba yn donkam 4.0 MW ka bor ding elektrik bad lah ban pynmih da kaba pyndonkam da ka diesel generator ba 1,250 kVA. Don ka bor ding elektrik ruh ba ioh na ka Meghalaya State Electricity Board (MeSEB) bad ia kane ka bor ding elektrik yn sa pyndonkam kumjuh ynda lah pynmih 5.0 million ton shi snem.

F.11) Ka jingdonkam ia ka um

- 35) Na ka bynta ban pynmih 2.0 million ton shi snem, ka jingdonkam um ka long 150 m³ shi sngi bad na ka bynta ban pynmih 5.0 million ton shi snem u mawshun la khein ba yn donkam 200 m³ shi sngi, ia kane ka jingdonkam ruh yn nang iai shim na Wah Phlangkaru bad Wah Umiam.

G) Ki jingiada mariang

36) *Ki jingiada mariang ka kdew ia kito lad ne rukom pyniada kiba la don lupa ha ka projek kiba la leh bad ki ban sa leh da ka LUMPL ki long kumne harum:*

Table 0.1. Ki lad jingiada.

Sl.No	Jingbatai	Ki rukom jingiada
1	<i>Ha kaba pynbiang ia ki thliw ba pynpra ia u mawshun:</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpyndonkam ia ki kor kiba lah paka bha kum ka juk mynta.</i> ▪ <i>Jingsam thliw ba pyndonkam bad ka um</i>
2	<i>Ka jingpynbthei</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpyntreikam ia ki tube ki bym dei da ka elektrik (NONEL) shocktube.</i> ▪ <i>Ka jingpynbthei ia ki tikli katkum ka jingai jingbit.</i> ▪ <i>Ym donkam shuh ban pynbthei arsien bad pyndonkam da ki kynja tiar pynpra maw (rock breakers).</i> ▪ <i>Khnamg ban set ia ka jingsied u maw dei ban tap ha ka por ba pynbthei ia ki tduh jong ka par bad ruh ia kawei pa kawei ka thliw ba la tap da u shyiap.</i> ▪ <i>Ka jingkhynniuh ka khyndew / ka jingjur ka lyer ha man la kawei pa kawei ka jingpynbthei.</i> ▪ <i>Ka jingioh jingmut na ka CIMFR ha kaba iadei bad ka rukom pynbthei mawshun na ka por sha ka por.</i>
3	<i>Ka jingpyntreikam da ki tiar kiba kham heh ban tih khyndew bad kit mar. (HEMM)</i>	<ul style="list-style-type: none"> ▪ <i>Ka jing sumar ia ki tiar ba pyndonkam ha ka jingtih mawshun</i>
4	<i>Ka jingkit ia u mawshun lyngba ka surok. (haul road)</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpyndonkam da ki kor rukom synreit um.</i> ▪ <i>Yn pyndonkam da ki kali kit um ha kaba synreit ia ka um ha surok ka ban poi sha par bad ha ka jaka trei ruh kumjuh.</i>
5	<i>Ka jingtyllyiat maw</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpynbiang da ki kor ban pynduna ka jingmih pui pui ha kaba pynhap ia u mawshun ha ka crusher hopper.</i> ▪ <i>Ha ka por ba pynhap ia u maw na kali ha ka kor tylliat maw(crusher) la pyndonkam da ki kor synreit um (fogger system) ba don hapoh jong ka kor ban pynduna ia ka jingmih pui pui.</i> ▪ <i>Ka don ruh ka jingsynreit um hapdeng u belt ba pyndonkam ban kit mawshun</i>
6	<i>Ka jing shalan ia u mawshun lyngba u LBC.</i>	<ul style="list-style-type: none"> ▪ <i>Yn pynbiang ruh da ki LBC kiba don jingtap na jrong bad ba tap shiliang na sha rud. Yn synreit ia ka um naduh ka jaka ba sdang kit mawshun khnamg ban kham duna ka jing mih pui pui.</i>
7	<i>Ka jingmih jong ka umjaboh na ka jingpyndonkam kaba man la ka sngi</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpyntreikam da ki san (5) tylli ki Package Sewage Treatment Plants (P-STPs) ban pynkhuid ia ka um jaboh ba mih na ki jaka sah bad ka jaka treikam .</i>
8	<i>Ka jingmih jong ka um jaboh na ka karkhana</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpyntreikam da ka Effluent Treatment Plant (ETP) kaba lah ban pynkhuid ia ka um ka ba mih na karkhana .</i>
9	<i>Ka jingmih jaboh.</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpynbiang ia ki jakhlia bym pyndonkam biang ha ki kam ri sniang</i> ▪ <i>Kiwei pat ki jakhlia ki bym lah ban pyndonkam biang la bret noh ha ka Shillong Municipal Waste Bin katkum ka jingbit ba la ioh na ka Shillong Municipality</i> ▪ <i>Ia kiwei kiwei ki tiar bym pyndonkam shuh kum ki kot, ki taiar kali, u belt ba pyntuid mawshun, bad ki tin jot la die noh.</i> ▪ <i>Ia ka um jakhlia ba la pynkhuid la pyndonkam ha ka rep ka riang.</i>
10	<i>Ki jakhlia kiba mih shabar kiba lah ban ktah ia ka mariang</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingpynbiang bad pynlang shipor ia ki jakhlia ba don jingma/jingktah ia ka mariang.</i> ▪ <i>Ia kine ki jakhlia baroh la bret noh katkum ka jingioh jingbit na ka MSPCB.</i>
11	<i>Ki jinthung jingtep</i>	<ul style="list-style-type: none"> ▪ <i>La rep 30,108 tylli ki jingthung ba dang lung hapoh ka par bad shabar ka par ruh kumjuh.</i>
12	<i>Ka jingpynbha biang ia ka par ba lah dep tih yn nang ia id shakmat (katkum ka Progressive Mine Closure Plan)</i>	<ul style="list-style-type: none"> ▪ <i>Ha ki jaka kiba lah dep tih ia u mawshun, ka LUMPL ka la rai ban thung noh da ki kynja jingthung bad yn nym don shuh kano kano ka jingtih ha kito ki jaka.</i> ▪ <i>La ai jingmut ba ki bynta ba halor jong ka par kiba lah dep tih yn pyndonkam da kaba thung jingthung.</i> ▪ <i>La mang ba la kumno kumno 16,240 tylli ki jait dieng yn thung naduh u snem u ba 6 hynriew ter ter kat kum ka jingpeit bad jingpyniaid jong ka tnat Forest jong ka jylla katkum ka Progressive Mine Closure Plan.</i>

H) U pud u sam

H.1) Ka jaka kaba la buh khnang ban ai jingtip shaphang u pud u sam jong ka par

- 37) Ka jaka kaba la buh khnang ban ai jingtip shaphang u pud u sam jong ka par ka jngai kumba 10 km na ka par. Kane ka jaka ka hap hapoh ka Community Development (CD) blok jong ka Shella bad Mawsynram kiba dang hap hapoh ka East Khasi Hills District.

H.2) Ka jingkdew ia ka jingdon jong ka par

- 38) Ka jaka kaba la shim wai na ka bynta ban tih mawshun ka don shaphang shatrai duh jong u lum Shillong. Ka jingbatai shaphang ka jingkdew kaba la kdew na shaphang shatei na u lum Shillong shaduh sha ka wah Umiam kaba hap hapoh ka ri India (kaba long ruh ka shnat wah jong ka wah Surma ha Bangladesh) la batai kumne harum:
- Ki wah ba tuid naduh na shatei shaduh shathie
 - U don u Lum Shillong uba jrong 1,800 m katkum ka jingthew na ka duriaw .
 - Ki lum ba don par shyiap ne mawshun ha ka jingjrong naduh 200 haduh 1800 katkum ka jingthew na duriaw.
 - Ka jingnoh rashing bad ka jingtuid u dew sympin ha ka jingthew ba jrong naduh 50m haduh 200 katkum ja jingthew na ka duriaw.
 - Ka jaka kaba madan ha Bangladesh ha ka jingjrong naduh 5 haduh 50 katkum ka jingthew na ka duriaw.

H.3) Ka jingstad saian kaba iadei bad ka jingpule shaphang ka mariang

- 39) Ka par bad ki jaka kiba shajan ka par ki kynthup ia ka Langpar, Shella bad Kopili. Ha Kopili lah ban shem ia u maw shyiap bad u kynja mawshun uba iar bha ban ioh. Ha Shella pat lah ban shem ia 6 tylli ki jait mawshun bad mawshyiap; kita ki long u mawshun Prang, u mawshyiap Nurpuh, u mawshun Umlatdoh, u mawshyiap bad mawshun Lakadong bad u mawshyiap Therria. Ha ka par ba la shim wai ban tih mawshun pat u don u mawshun Prang uba tap ia ka Shella baroh kawei. U mawshun u don ha baroh arliang ka wah Umiam; kata na shaphang ja sepngi bad mihngi. Une u mawshun u dei u mawshun Shella bad u kynthup ia u mawshun Prang bad Umlatdoh.
- 40) Shaphang sha trai jong ka par lah ban shem ia u maw Kopili. Shaphang sha sepngi, u mawshun Kopili u kham bun ban ia u mawshun Shella. Shaphang shaneng jong ka par lah ban shem ba don ka jaka ba long riat. Ka jingjrong jong kane ka riat ka long kaba katno spah meter shuh. Shaphang sha mihngi jong ka par ka don ka wah umiam bad nangta pat la bud beit ter da u mawshun Prang. Sha ka liang mihngi lah ban shem ia u mawshun Prang- mawshyiap Narpuh bad u mawshyiap Narpuh- mawshun Umlatdoh. Shaphang sha trai duh jong ka par, u mawshun Prang u la shah tap noh najrong ha u maw Kopili. U pud hapdeng u mawshun Prang bad u maw Kopili lah ban ithuh namar ka don ka jingdkut noh hapdeng shaphang sha mihngi bad sepngi.

H.4) Ka rukom long shapoh khyndew bad ka jingkhynnuih jumai ha kane ka jaka.

- 41) Katkum ka map 2002 jong ka Bureau of Indian Standards (BIS), baroh kawei ka jylla Meghalaya ka hap hapoh ka Zone V. Kane ka Zone V ka kynthup ia ki jaka kiba don jingma haba khynnuih jumai

H.5) Ka jingbatai shaphang ka jaka

- 42) Ka jaka ka kynthup ia ki lum rit shaphang sha trai duh, kiba don ia ka jingjrong haduh 700m amsl. Ka jingjrong jong ka par mynta ka long naduh 70 m haduh 186 m ha ka jingthew kaba lah kham duna (ha ka por ba dang sdang tih ia ka par, ka jingjrong ka don naduh 70 m haduh 190 m). Sha shaphang shatei jong ka par, ka jaka ka long kaba sharing bad kaba long riat bha. Sha ki bynta kiba kham shajrong jong ka riat, ka don ka shnong Nongtra.
- 43) Hapoh ka par bad shajan kane ka par la don bun u mawshun uba la pra bad ba la kylla thlong na ka jingiaid jong ka um (Karstified limestone). Ka um kaba tuid ka pyntwa ne bam pat ia kiwei kiwei ki jaka kum ki lynti ba la shna ban ia id ka um. Ka jinglong jong ka jaka hapoh ka par ka pynsangeh ia u shyiap bad ka um sha ka jaka pynlang um slap ha Phlangkaruh.
- 44) Artylli ki thlong kiba la pynlong na ka jingkit ka um, kiba don ha kane ka jaka ki kynthup ia ki thlong ba la pynlong na ka *jingkit ka um mawshun bad ki thlong kiba la pynlong na ka jingtwa ki krem. Kine ki thlong ki don shabar shamar sha trai duh jong ka par. Ka jaka kaba jrong tam ha khmut jong kine ki thlong ka long 63 m RL (ba la shu antad) bad sha trai jong ki thlong ka long 20 m RL (ba la shu antad). Ka jingjngai na shaphang sha sepngi shaduh

shaphang sha mihngi ka long 200 m (ba la shu antad). Shaphang sha sepngi shapoh ki thlong, ki don ki krem. Kane ka jing pynlong ia ki thlong na ka jingtwa ka krem kadei na ka jingkhynnuih jumai.

H.6) Ki jaka ba pynlang um slap- Ka rukom pyntuid bad ka jingbatai shaphang ka jingpyndonkam ia ka um

- 45) Katkum ki kyndon jong ka Upper Area Treatment Plan, CIMFR & NEERI, May 2010, na bynta ka jingpyntreikam ia ka parshun ha Nongtraï, la pynbiang da ka jaka ba pynlang umslap kaba 253 km² (kaba hap hapoh India). Kane ka jaka ka don hapoh 10 km na ka par bad la don lai tylli ki jaka pynlang um, kita ki long- (i) Ka jaka pynlang um jong ka Umiam River System kaba don ka jingheh kaba 103.46 km² (40.89%) kaba kynthup ia artylli ki jaka pynlang um kiba kham rit (ii) Ka jaka pynlang um ha Phalangkaruh kaba don ka jingheh kaba 5.62 km² (2.22%), bad (iii) Kiwei pat ki jaka pynlang um kiba kynthup ia ka wah Khasimara kaba don ka jingheh kaba 144 km² (56.92%). Ka jaka pynlang um ha Phalangkaruh kadei shibynta jong ka Umiam River System bad lang bad ka wah Khasimara, ka tuid sha ka wah Surma ha Bangladesh bad nangta ka tuid pat sha wah Meghana kaba don ha Bangladesh.
- 46) Ka par ka iajan bad ka jaka pynlang um ha wah Phalangkaruh, kaba la ioh ban pynlang ia ka um kaba mih na lai tylli ki umpohliw kiba jngai kumba 270 m na shaphang sha trai duh jong ka par ha ka 22m RL.

H.7) Ka jingbatai shaphang ka rukom long bad ka jingtuid jong ka um kaba napoh khyndew bad kaba tuid ha jrong khyndew (Hydrogeology)

- 47) Ym shim don kano kano ka rukom ban jar ia ka um ha jaka ba don ka par. Ka um kaba tuid ha ka par bad shajan par kadei ka um kaba jakhlia na ka jingpra u mawshun bad ymdon kano kano ka rukom ban jar ia ka. Ka um kaba tuid na u mawshun ka ksam shapoh bad ka pyn thliw ia u mawshun. Dei na kata ka daw ba ka um kaba don hangne ka long kaba syaid bad kaba pher.
- 48) Ka LUMPL ka la buh ia ki piezometer (ki tiar ba thew ia ka jingdon jong ka um) ha laitylli ki jaka shaphang sha trai duh jong ka par ban khmih ia jingdon ka um. Ka jindon jong jong ka um ka kylla ha ka por ba slap bad ba rkhiang wat la kine ki don ha ka jingjrong ban ia ki umpohliw lyngba baroh shi snem.

H.8) Ka jingpyndonkam ia ka khyndew.

- 49) La pyndonkam ia ka jaka 10 km na ka par ha Nongtraï hapoh ka ri India kumba 253 km² kaba kynthup ia ki 'lawbah kiba don 39.8%, ki khlaw kiba kham rit kiba don 20%, ki jaka ba lah ban thung ban rep kiba don 14.6%, ki jaka ba don ki dieng phyrngop bad u phlang kiba don 16.3%, ki jaka bym don eiei kiba long 4.0%, ki jaka ba don ki wah bad ki jaka ba tyrkhong kiba don 2.82%, ki jaka ba lah ban tei jingtei kiba don 1.4% bad ki par bad ki jaka ba don maw kiba don 1.2%

H.9) Ka khyndew bad u shyiap

- 50) Ymdon khyndew ha kane ka par. Tang khyndiat bha u khynduh uba najrong lah ban shem ha ki thliw bad ki jaka ba orpait. Lah jan baroh kawei ka jaka ka don da u mawshun. Ha ki jaka kiba don shajan ka par, ka rukom long ka jaka ka ia syriem bad hapoh ka par.
- 51) Shiphew ki jait khyndew bad saw jait u shyiap la lum na ka jaka ba pyntreikam ia ka projek. La shem ba kine ki jait khyndew bad jait shyiap ki long kiba lah ban pdiang.

H.10) Ka jinglong bad jingbatai shaphang ka suin bneng

- 52) Ka jinglong ka suin bneng ha ka Nongtraï Limestone Mine bad ha ki jaka shajan ka long ka ba shit ha ka por lyiur bad pyngngad ha ka por tlang. Ka jingdon jong ki lum rit na sha sepngi, shaneng bad sha mihngi ryngkat lang bad ka jingdon jong ki jaka madan ba shlei um ha Bangladesh na sha trai ka pynlong ia ka suin bneng ba kan long ha kane ka rukom. Ka Sohra (Cherrapunjee, kaba don 15 km shaphang shaneng ka mihngi shamar shatei) bad ka Mawsynram (kaba don 14 km shaphang shaneng) ki dei ki jaka kiba ioh ia u slap uba jur tam ha pyrthei. Ka don ka jingkylla ha ka aiom kaba ka por shuwa ban slap ka long naduh u bnai Lber haduh Iaiong; ka aiom slap ka long naduh u Jymmang haduh pdengbnai Risaw; ba rang slap naduh pdengbnai Risaw haduh kutbnai Nohprah; bad ka aiom tlang naduh kutbnai Nohprah haduh Rymphang

- 53) *Katkum ka jingkhein ba la ioh lum da ka LUMPL na ka par naduh u snem 2010 haduh 2014, ka aiom tlang ka sdang naduh kutbnai Nohprah bad la nang bteng haduh kutbnai Rymphang. U Kyllalyngkot u long u bnai uba pjah tam ha kaba ka jingsyaid jong ka suin bneng ka long tang 3.0 C (ha ka 10 tarik u Kyllalyngkot, 2013) bad ka jingsyaid jong ka suin bneng ha kaba la buh ba kadei kaba shit tam ka long 40.2 C (ha ka 7 tarik u Rymphang, 2012). Ka jingsyaid jong ka suin bneng ka iapher na 16.0 C haduh 29.1 C. Ka jinglong jong ka suin bneng ba dei na ka jingsngem pat ka iapher naduh 11.1% (ha u Lber) haduh 94.2% (ha u Nailar).*
- 54) *Ka jingkhein ryntih ia ka jingjur jong u slap ka long 7,780 mm ha ka 5 snem bad ka jinghap u slap uba jur tam ka long 689 mm (ha ka 15 tarik, Naitung, 2012). Ha ka jingkhein ryntih, la hap slap 150 sngi ha ka shi snem (la khein ba kadei ka sngi ba slap lada hap u slap 2.5 mm ne palat).*
- 55) *Ka lyer ka beh na shaphang Shatei, na Shatei- shaphang sha Sepngi Shatei, shaphang Mihngi shaphang Shatei, na shaphang sha mihngi shaphang shaneng,na Shathie, na Shathie- shaphang sha mihngi shathe bad na shaphang Shathie duh- sha sepngi sha trai duh. Ka jingkhein ryntih ia ka jingjur ka lyer ka long naduh 0.3 m/sec haduh 5.9 m/sec katba ka jingbeh jur ka lyer ha ka 5 snem la shem ba ka dei 55m/sec.Ka lyer ka khlain tam ha u bnai Iaiong bad ka duna tam ha u Nohprah. Ka jingjur jong ka 'eriong bad u kyllang ha kane ka jaka ka pynlong ia kane ka jaka ba kan hap hapoh ka Very High Damage Risk Zone (ka jaka ka ban jur ka jingjulor ynda khie ka 'eriong ne u kyllang)*
- 56) *Ka jingshlei um ka duna ha ki jaka ba long lum bad ka jur ha ki jaka ba long madan ha Bangladesh na ka daw jong ka jingjur u slap. Ka par bad ki jaka shajan par ki don ha jrong lum bad na kane ka daw kim ju shlei um.*

H.11) Ka jinglong jong ka lyer kaba beh bad ka jinghap u pui pui

- 57) *La khmih bniah ia ka jinglong jong ka lyer na phra tylli ki jaka kiba jngai 10 km pyllun na ka par. Ia ka jingkhein ryntih hapoh ka arphewsaw kynta ia ka PM10 (kaba don kham duna ia ka 10 um), PM2.5 (kaba don kham duna ia ka 2.5 um); SO2 (Sulphur Dioxide); Nox (ki Oxide jong ka Nitrogen); bad ka jingkhein ryntih hapoh ka phra kynta ia ka CO (Carbon Monoxide) la pynkreh katkum ka National Ambient Air Quality Standards (NAAQS).*
- 58) *Ia ka jinghap u pui pui la khmih bniah ha ka ophis ha par (ha kaba la khmih bniah lai bnai lynter) kaba long naduh 9.84 g/m2/ shi bnai haduh 10.31 g/m2/shi bnai*

H.12) Ka jingjur jong ka jingsawa

- 59) *Ia ka jingsawa kaba mih ha ka jingpyntreikam ban tih marwshun ha kane ka par la khmih bniah ha 10 tylli ki jaka (8 tylli ki jaka kiba long ki jaka shong jaka sah ha ki shnong kiba marjan bad artylli pat ki long ki jaka kiba shajan ka ophis ha ka jaka ban rung sha ka par). La khmih bniah baroh arphewsaw kynta arsien shisnem kata ka long ha u bnai Risaw bad Nohprah.*
- 60) *La lap ba ka jingthew ia ka jingsawa ha ka por mynsngi ha ki jaka shong shnong ka don naduh 46.0 haduh 54.8 d B (A) kaba long kaba kham duna ia kaei ba la buh ha ki jaka shong shnong kata kaba don 55 d BA. La lap ba ka jingthew ia ka jingsawa ha ka por miet pat ka don naduh 39.6 haduh 49.1 d B (A) katkum kaei kaba la buh kaba don 45 d BA. Ia ka jingthew ha ka por mynsngi la thew bha katkum ki kyndon ba la buh na bynta ki jaka shong shnong. Ka jingsawa kaba sawa mynmiet ka long kaba kham jur kata ka long 49.1 d B(A) bad 47.8 d B(A) katkum ka jingthew ba la thew na iew Shella bad 45.9 d B(A) katkum ka jingthew ba la thew na ka shnong Duba bad kane ka ktah da ka jingtuid jong ka wah Umiam kaba don marjan.*
- 61) *Ha ki artylli ki jaka pyntreikam, kawei kaba long ha ka ophis ha par bad kawei pat na ka jaka ban rung sha ka par, ka jingsawa ka long 61.0 d B(A) haduh 64.8 d B(A) mynsngi kaba long kaba kham duna ia kaei kaba la buh, kata ka long 75 d B(A). Mynmiet pat ka long 54.8 d B(A) haduh 61.7 d B(A) kaba long kaba kham duna ia kaei ba la buh, kata ka long 70 d B(A) katkum u pud ba la buh ha ka jingpyntreikam ha ka par.*

H.13) Ka jingsngur jong ka um

- 62) *Ia ka jingsngur jong ka um ha ka ban ioh pyndonkam umdih (IS: 10500) la peit da kaba shim nongmuna 12 sien na saw jaka shisien shi bnai, lai bnai lynter, kata na shaneng bad sharum jong ka wah Phlangkaruh bad wah Umiam. Ka jingthew ia kane ka um ha ka ba pakka bha katkum ka CPCB ka hap ka Klas A & B*

H.14) Ka jingsngur jong ka um kaba mih napoh khyndew

- 63) *Ia ka jingsngur jong ka um kaba mih napoh khyndew ha ka ban ioh pyndonkam umdih (IS: 10500), la peit da kaba shim nongmuna 15 sien na san (5) jaka: shisien shibnai, lai bnai linter. Ka jingthew ia kane ka um ka pyni ba ka long kat kum ki kyndon ba la buh da ka IS 10500.*

H.15) Ka jinglong jong ka um kaba la dep pyndonkam

- 64) *Ha ka um kaba la dep pyndonkam ha ka karkhana shna kali ba don ka par ha Nongtraï la lap ba ka long katkum ki kyndon ba la buh na ka bynta ka rukom pynmih um jakhlia.*

H.16) Ka jingiaid jong ki kali

- 65) *Ka khmih bniah arsien ia ka jingiaid sharum shaneng jong ki kali kit mar ha ka surok bah kaba don na par bad kaba poi sha jaka pynpra maw bad ka surok PWD kaba don na jaka sah kaba iaïd sha par. Ynda la kheïn ryntih, la lap ba hapoh shi kynta 70 tylli ki kali kit mar ki iaïd na ka surok bah ba ju kit mar. Na ka surok PWD kaba don na jaka sah sha par la lap ba iaïd 8 tylli ki kali. Lah ban iaïd sha ka par lyngba ka surok PWD.*

H.17) Ka jingpule shaphang ka jingiadei hapdeng ki briew bad mrad bad ka jaka ba ki shong ki sah (Ecology)

- 66) *Ka jingkhmih shaphang ka jingiadei hapdeng ki briew bad mrad bad ka jaka shong jaka sah jong ki la pynlong da ka skul bah North Eastern Hill University (NEHU), Shillong bad ERM ha u snem 2013 ka jingkhmih bniah ne ka sorbey la pynlong da ka ha ka por slap naduh 25 tarik u Jymmang, 2014 haduh 17 tarik u Nailur, 2014. La khmih bniah ka jinglong jong ka par bad ki jaka shajan par kiba don 10 km ka jingjngai na par bad kane ka sorbey ka ia syriem bad kaei kaba la dep leh ka NEHU ha u snem 2010*
- 67) *La khmih bniah ia hynriew tylli ki khlaw (i) ki khlaw kiba ki sla bad ki dieng ki im tang shipor- kiba don sha ki bynta kiba sharum na pdeng par, (ii) ki khlaw kiba don hajan jaka pyntreikam ha ka jingjrong kaba 800 m, (iii) Ki khlaw kiba don ha ka jingjrong 900-1800 m amsl hajan ka jaka pyntreikam, (iv) Ki kper ha khlaw bad ki kper soh- kiba don bun ha ki jaka shong jaka sah hajan jaka pyntreikam, (v) Ki khlaw kiba don shajan wah Umiam bad wah Phlangkaruh hajan ka par, (vi) ki khlaw kiba ker pyllun ia u Long Conveyor Belt. Katkum ka UNEP-WCMC, la phiah ia kine ki khlaw sha ki saw(4) jait; kita ki long-(i) Ki Tropical Lower Montane Forest (forest type-13), (ii) ki Tropical Semi-Evergreen Moist-Broadleaf Forest (forest type-16), (iii) ki Deciduous/Semi-deciduous Broadleaf Forest (forest type 21), bad (iv) Sparse Trees & Parkland (forest type-24)*
- 68) *Ha kane ka jaka (hapoh par bad shajan), la lap ba don 438 tylli ki jingthung kiba mih na 122 jait. Na kine, 143 jait ki dei ki dieng (> 5cm dbh), 67 tylli ki dei ki dieng phyrngop, 126 ki dei ki kynbat, 65 tylli ki dei ki kynja jingthung kiba snoh shajrong, 8 tylli ki Liana(ki jingthung kiba snoh shajrong bad kiba kyrwoh), 22 tylli ki Epiphyte(ki jingthung kiba mih ha jrong kiwei pat ki jingthung), 4 tylli ki dei ki siej bad ki dieng tlai, 1 u rattan(u dieng tlai uba snoh shajrong) bad 2 pat ki dei ki jait jingthung kiba mih ha jrong jong kiwei pat bad kiba bam kylla ia ki. Hapoh ka jaka ba tih mawshun, la lap 162 tylli ki jingthung kiba mih na 74 jait kiba kynthup ia 56 tylli ki dieng, 32 tylli ki dieng phyrngop bad 40 tylli ki kynbat, 21 tylli ki dei ki jait jingthung kiba snoh shajrong, 2 tylli ki liana(ki jingthung kiba snoh shajrong bad kiba kyrwoh), 1 u rattan(u dieng tlai uba snoh shajrong), 7 tylli ki Epyphyte(ki jingthung kiba mih ha jrong kiwei pat ki jingthung) bad 3 tylli ki siej bad kiwei ki dieng tlai. Ia ki juh ki jait jingthung kiba la lap ha jaka ba tih mawshun, la lah ruh ban shem ia ki shajan ka par.*
- 69) *Na kine ki 438 jait, 190 tylli lah ban pyndonkam ban ioh nong. Saw tylli ki jait jingthung kiba don shajan par la lap ba ki don ka jingma ban duhjait noh. Katkum ka Indian Red Data Book, tang uwei u jait jingthung u hap hapoh ki jingthung kiba don ka jingma ban duhjait noh, uta u long u Elaeagnus Conferta. Katkum ka IUCN Red List, artylli ki jait jingthung, u Saraca asoca bad u Delonix regia ki don ka jingma ban duhjait noh. Khlem ioh rekord eiei shaphang kine ki jingthung ha por ba dang leh sorbey. Ha ka jaka ba tih mawshun pat ym don uwei ruh u jait jingthung uba don ka jingma ban duhjait noh katkum ka jingioh jingtip jong ka Red Data Book bad IUCN Red List.*
- 70) *Katkum ka jing sorbey ia ki um ki wah da ka NEHU ha kane ka jaka ka pyni ba don 59 jait ki jingthung kiba don ia ka algae ha kaba 34 tylli ki dei ki Bacillariophyceae, 10 jait ki dei ki Chlorophyceae, 6 jait ki Cyanophyceae, 8 jait ki Euglenophyceae uwei u dei u Chrysophyceae. Na baroh kine ki jait jingthung, la lap tang uwei uba hap hapoh ki*

Chrysophyceae na ka jaka ba tih mawshun. Baroh kine ki jait jingthung kiba lap ha ka jaka ba tih mawshun lah ruh ban lap shajan par.

- 71) Ka jingbun jong ki sim ki mrad bapher bapher ka pyni ba la don 15 jait ki mrad khlaw, 88 jait ki sim, 8 jait ki mrad kiba par da ka kpoh, 7 jait ki mrad kiba im ha ryngkew bad ha um, 75 jait ki thapbalieh bad 17 jait ki dohkha. Na baroh kine ki jait mrad ba don hangne, ka Oriental Pied Hornbill (*Anthracoceros albiros tris*), ka Blood Pheasant (*Ithaginis cruetus*), ka Mountain Bamboo Partridge (*Bambusicola fytchii*), ka Hill Myna (*Gracula religiosa*) ki hap hapoh ka Schedule I jong ka Wildlife Protection Act (1972) hynrei katkum ka IUCN, kine ki juh ki don hapoh ki jait mrad bym don jingma ban duhjait.

H.18) Ka jingpule kaba iadei bad ka imlang sahlang bad ka ioh ka kot

H.18.a) Ka rukom khein kaba ia hap bad ka imlang sahlang bad ka ioh ka kot (Socioeconomic Assessment).

- 72) Na ka bynta ban ioh jingtip shaphang ka imlang sahlang bad ka ioh ka kot, la treikam da kaba ia shim bynta lang ha ka por ba leh sorbey ha ki iing ki sem, da kaba kylli jingkylli na kiba trei ha par (kiba lah trei naduh ba sdang pynreikam ha par), jingiamir jingmut lang bad ki dkhot jong ka Durbar, ki rangbah hapoh shnong, ki kynthei briew, kiwei kiwei ki dkhot nongshongshnong bad ki nongmihkhmat na ka liang ka sorkar. La pynlong ia ki jingiakren hapdeng jongki kiba kynthup ia ki nongshongshnong jong ka shnong Nongtraï, Shella bad kiba shong shabar ka Shella. La ioh jingtip na kine ki jingiakren kiba la pynlong ryngkat ka jingiadonlang ki Kontraktor bad ki nongtrei jong ka LUMPL. Ka jingwad jingtip kaba iadei bad ka imlang sahlang la wad lyngba ka jingleit jngoh ki nongtrei jong ka ERM naduh 28 tarik u Iaiong haduh 5 tarik u Jymmang, 2014. Ia ka jingwadjingtip la leh da kaba sorbey bniah.
- 73) Ka Projek bad ki jaka kiba shajan ki hap hapoh ar CD Blok jong ka Shella Bholaganj Block bad Mawsynram Block. Ki headquarter ki don ha Cherrapunjee (Sohra) bad ha Mawsynram. Ka jaka ba don ka par ka hap hapoh ka shnong Nongtraï jong ka Mawsynram CD Block bad bun na ka jaka ba pyniaid ia u Long Conveyor Belt (kynja kor ba pyniaid ia ka kali kit mar) ka hap hapoh ka shnong Shella jong ka Shella Bholaganj Block. Ka headquarter jong ka district ka don ha sor Shillong. Ki Durbar shnong Nongtraï bad Shella ki dei ki bynta jong ka Hima Shella kiba kynthup ia ki khyndai (9) tylli ki dorbar shnong.

H.18.b) Ki shnong bad ka jingbuh rekord ia ka jingiap bad ka jingkha khyllung

- 74) Ka par ha Nongtraï bad ka jaka pynpra maw (kaba dei ka jaka jong ka shnong) ka hap hapoh ka jingpeit jong ka dorbar Nongtraï. Na ka bynta ban kham pynheh shuh shuh ia ka Projek, khlem donkam shuh ban wai jaka ne theid jaka shuh bad kumta kane ka Projek kam shim ktah ia ki long iing long sem jongno jongno ruh hapoh shnong bad ym donkam ban pyndonkam ia ka R & R
- 75) Ka Nongtraï Limestone Mine kaba la pynreikam da kaba shu shim wai ia ka jaka, kiwei kiwei ki jingtei kiba la pyndonkam ha ka jingtih bad jingkhaii mawshun bad ka jaka ba pyniaid ia u LBC, ki kynthup lang hapoh ka jingpeit jong ki nongshongshnong jong ka shnong Nongtraï. Katkum ka Census ba la ioh na ki rekord jong ka ri India, ki long iing long sem (ha ki 10 tylli ki shnong hapoh Shella bad kawei ka shnong hapoh ka jingpeit jong ka dorbar Nongtraï) ki don 433 tylli katkum ka Census jong u snem 2001 bad 534 ka jong u snem 2011. Ka jingbun u paid shong shnong ka long 2,197 ngut katkum ka Census jong u snem 2001 bad 2,648 ngut jong u snem 2011. Ka Phlangkaruh ka long ka shnong kaba jan tam kaba don 20 tylli ki long iing long sem (ka jingbun paid ka long 100 ngut). Kane ka shnong ka jngai kumba 1 km na ka par mawshun.
- 76) Katkum ka Census jong u snem 2011, ka jingthew kaba pyniadei ne pyniabiang ha ka jingdon ki kynthei bad shynrang briew (ka jingdon jong ki kynthei ha man la 1000 ngut u shynrang briew) bad ka jingnang jingstad ha ka lain pule puthi jong ki nongshongshnong ha kine ki shnong hapoh ka jingpeit jong ka dorbar Shella ka long 1,049 bad 93.4%. Ha ka shnong Nongtraï, ka jingdon jong ki shynrang bad kynthei briew bad ka jingnang jingstad ha ka lain pule puthi ka long 1,049 bad 93.4%. Ka jingdon jong ki briew kiba hap hapoh ka Schedule Tribe (ki riwolum) ha ki shnong kiba hap hapoh ka jingpeit jong ka dorbar Shella ki long 97.1% bad ha ka shnong Nongtraï pat ka long 99.4%.

- 77) *Ki jaka kiba long madan kiba ker bad kiba don hajan u LBC ki dei ki jaka ba shong ba sah u bym dei Khasi. Kine ki jaitbynriew ki im ja na ka rep ka riang (kynthup lang ia ka jingrep jhur bad kumta ter ter) bad ha ka jinghikai ban rep. Ha ki snge iew, la lah ban ioh ia ki jhur ba dang shu dep thung da kine ki jait bynriew bym dei khasi.*

H.18. c) Ka jingnang jingstad ha ka liang ka pule puthi.

- 78) *Ka jingroi jingpar ka jingnang jingstad ha ka liang ka pule puthi ka dei na ka jingdon ki skul (primary bad sekundary) ha kine ki jaka. Ka jingdon jong ki skul kiba la seng bad pyniaid da ki missionary kristan bad ki Trusts kum ka Ramkrishna Mission ki long ki daw tynrai ba balei ka don ka jingroi jingpar ha ka liang ka pule puthi ha kine ki jaka.*
- 79) *Ka LUMPL ka la iarap ban pynkiew ha ka roi ka par, ka pule puthi ha ki shnong Nongtraï bad Shella kata da kaba seng ia ka skul sekundary ha Nongtraï, la kham pynkiew ruh ia ka tulop jong ki nonghikai skul, la pynbiang ia ki kot pule, ki uniphom skul bad ia ki miej bad shuki skul. Ia ka scholarship (ka pisa ba ai ia ki khynnah skul ban ioh pyndonkam ha ka jingpule jong ki) ruh la pynbiang da ka LUMPL.*

H.18.d) Ka jingpynbiang ia ki jaka sumar na ka ka bynta ka jingkoit jingkhiah

- 80) *Ki jaka sumar ha kane ka jaka ki kynthup ia ki jaka sumar kiba la seng ne la thaw da ka sorkar bad ki riw shimet (kum ki sub-centre, ki dispensary, ki centre ba la seng thaw bad seng da ka Trust) kiba ai jingsumar ia ki nongshongshnong ha kane ka jaka. Ka Public Health Centre (PHC) kaba don ha shnong Disong ka don la ki doktor, ki nongpynkha khyllung bad kiwei kiwei ki nongtrei. Ka don ruh ka sub-centre ha Sohlap kaba ai jingsumar ia 2,240 ngut ki nongshongshnong. Ha Ichamati CHC pat ka don ka jaka sumar kaba don 30 tylli ki jingthiah.*
- 81) *Katkum ka jingiasyllok bad ki nongtrei ha ki PHC bad ka jingiakren bad ki doktor bad ki nongpyniaid ia kine ki jaka, la lap ba ka jingiohpang na ka daw ba ym biang ka bam ka dih ka lah kham duna. Bun na ki long iing kiba don hapoh ka jingpeit jong ka Dorbar shnong Shella bad Nongtraï ki la ioh jingsumar na ki kali kiba ai jingsumar (mobile medical van) (kiba la pynmih da ka LUMPL) bad kine ki kali ki iarap ban pynkiew ia ka jingkoit jingkhiah ha kane ka jaka. La ioh ia ki report na ki PHC bad kiwei ki jaka sumar ba mynta lah kham duna ka jingiohpang na ka daw ba ym biang ka rukom bam rukom dih.*

H.18.e) Ka Prokram na ka bynta ka jingroi jingpar ka imlang sahlang kaba la pyniaid da ka LUMPL (Community Development Programme)

- 82) *Ka LUMPL ka la sdang ia ki jingpyntreikam bapher bapher na ka bynta ka jingroi jingpar jong ka imlang sahlang bad ka la kham bniah ha ki liang ka jingai jingsumar; ka jingkyrshan ia ka pule ka puthi; ka jingpynbha ia ki jingtei bad ki surok syngkien; ki prokram ba la pynmih na ka bynta ban ai jinghikai ban biang ka kamai kajih- kum ka jingai buit kumno ban treikam, ki prokram ban kham pyntbit bad ban kham ioh jingtip shaphang ki kam. Ka LUMPL ka bei tyngka ruh ynda don kano kano ka prokram kaba iadei bad ka imlang sahlang ne ki riti dustur jong ki nongshongshnong.*
- 83) *Ki jingtreikam jong ka CSR naduh u snem 2006 haduh mynta la pyntreikam ha ki 12 tylli ki shnong. Ka rukom treikam na bynta ka roi ka par ka shong katkum ka jingdonkam ki dorbar/ ki nongshongshnong bad ka LUMPL. Ka Joint Komiti kaba treikam na ka bynta ka roi ka par ha ka imlang sahlang (Community Development- JCCD) ka don ia ki dkhot kiba la thung da ki dorbar bad ka CSR jong ka LUMPL hapoh ki dorbar jong ka shnong Nongtraï bad Shella na ka bynta ban pyntreikam ban pynkiew ia ka roi ka par ha ka imlang sahlang.*
- 84) *Ka LUMPL ka pyntreikam ia ka kali ba ai jingsumar (ha kaba la don u doktor, ka nos bad ki tiar ba donkam na ka bynta ban ai jingsumar) ha ki jaka ba pyntreikam ia ka Projek ha ki dorbar jong ki shnong Nongtraï bad Shella. Ka LUMPL ka sumar ei ia ki nongshongshnong. Ka LUMPL ka la ai jingsumar da kaba phah ia ki doktor bad ki nos katne sien shitaiew:*
- a) Nongtraï (kynthup lang bad ki shnong kiba marjan)- Arsien shitaiew*
 - b) Mawryngkhong (kynthup lang bad lai ne saw tylli kiwei pat ki shnong-Nongrum, Nongnong)- Shisien shitaiew*
 - k) Umsaw (kynthup lang ia hynniew ne phra tylli kiwei pat ki shnong) - Shisien shitaiew*
 - d) Shella Bazaar (Jan baroh kawei ka Shella bad ki shnong kiba marjan) - Shisien shitaiew*
 - e) Shella (Jasir, Jamew, Duba, Disong) - Shisien shitaiew*

I.1) Ki jingsiew jong ka LUMPL ia ka SPV

85) Ka LUMPL ka la pynthep kumba INR 114.25 klur sha ka SPV haduh ka 30 tarik, Nailur, 2015.

J) Ka jingktah jong ki projek ia ka mariang bad ki buit kumno ban pynduna ia ki.

J.1) Ki lad ne ki rukom kiba la pynmih ban tip shaphang ki jingktah ia ka mariang.

86) Ki lad ne ki rukom kiba la pynmih ban tip shaphang ki jingktah ia ka mariang kiba mih na ka jingpyntreikam ia ki project na ka bynta ban kham pynheh shuh shuh ia ka par lem bad kiwei ki rukom pyntreikam ha par, ka long katkum ka jingthew ia ka Jingheh (jingjur) jong ka jingktah; kata ka long ka jingkylla ha ka rukom long ka mariang; bad ka jingjem/ ka jingdonkam/ ka jingshong dor jong ka mar kaba la tih bad ka jingktah ia ki brieve kiba shong hajan par.

J.1.a) Ki jingbatai shaphang ka jingktah jong ka jingtih mawshun

87) Ki jingbatai shaphang ka jingktah jong ka jingtih mawshun ka long kumne harum:

- a) Ka jingktah ka bym da jur than ka dei ha kaba ym shim don kano kano ka jingktah ia ki mar/ ki brieve ne kino kino ki jingdon ha ka mariang na kaba pyntreikam ia kano kano ka kam tih maw lane ka jingktah kaba lah mut lupa ba kan sa ktah ka long ka bym lah ban shemphang (imperceptible) bad kaba ktah ia ka rukom long jong ka mariang ha ka jaka bad hajan jaka ba don ka par.
- b) Ka jingktah kaba malu mala ka dei ha kaba ki mar/ ki brieve bad kino kino ki jingdon ha ka mariang la shem ba la ktah ia ki bad kane ka jingktah kam dei pat kaba jur than (lada pynduna ne khlem pynduna ia ka jingpyntreikam) bad ka jingktah ka lah ban long na ka daw ba ki ne ki mar/ ki brieve ne kino kino ki jingdon jong ka mariang ki long kiba tlot bor/ kiba kloi ban mong ne pang ne julor/ ki bym da donkam. Ha baroh artylli ki rukom ktah, ka jingjur jong ka jing ktah kan long hapoh u pud uba la buh.
- c) Ka jingktah kaba lah kham jur ruh ka long hapoh u pud uba la buh bad ka lah ban long kaba duna ka jingjur bad kam da ktah than haduh katta katta lane ka lah ruh ban long kaba lah kham jur kaba lah jan jam ia u pud uba la buh. La pynduna ia ka jingktah sha ka As Low As Reasonably Practicable (ALARP).
- d) Ka jingktah kaba lah jur bha ka long kaba lah jam ia u pud uba la buh. Ka jingktah ka kham jur bha lada ki mar/ki brieve ne kino kino ki jingdon jong ka mariang ki long kiba tlot bor. Ka jingjur jong ka jingktah ka shong ha ka jingbha jong ka mar kaba mih na ka jingpyntreikam ia ka Projek kata ka long da kaba khien (da kaba pyndonkam ia ki stakeholder bad regulator) ba haduh katno kane ka jingmih na par ka kham bun ban ia ka jingktah jur ia ka mariang bad ki jingdon jong ka.

J.1.b) Ka jingpyntreikam ia ka projek

88) Ia ka jingktah la thew da u jingthew. Ka rukom ktah ia ka mariang na ka jingpyntreikam ia ka Projek (ban pynmih kham bun shuh ia u maw kata na 2.0 MTPA sha 5.0 MTPA) bad kiwei kiwei ki jingpyntreikam kiba iadei bad ka jingtih mawshun(katkum ka jingbatai ha ka Serial No.F) la lap ba la don ka jingpher jong ka rukom long jong ka mariang na ka daw jong ka jingtreikam ia kane ka projek bad la shem ruh ba lah sdang ktah naduh na sha tynrai bad kan nang ktah katba dang pyntreikam ia ka jingpynmih kham bun u mawshun.

J.1.c) Ka jingthuh ia ki jingktah kiba mih na ka jingtih mawshun.

89) La pynmih ia ka jingsaindur ha kaba la pyni ia ka jingktah kaba mih na ka jingpyntreikam ia kawei pa kawei ka Projek bad kumno ba ka ktah ia ki mar/ ki brieve bad kino kino ki jingdon ha ka mariang hapoh kane ka jaka (Area of Influence). Ki rukom jingktah la kynthup ha ka Table 0.2 harum

Ka daw jong ka jingktah	Ka jingbatai lupa shaphang ka jingktah	Ki rukom ban pynduna ia ka jaboh	Ka jingktah ba lah ban don
1.Ka rukom long jong ka lyer			
<p>Ka jingmih jong ka lyer jaboh PM₁₀ (ki pui pui kiba duna ia 10microns) PM_{2.5}(ki pui pui kiba duna ia ka 2.5microns) , ka tdem sulphur dioxide(SO₂) , ka oxide jong ka Nitrogen(Nox) bad carbon monoxide (CO) ka kyntthup</p> <ul style="list-style-type: none"> ▪ Ka tynrai ba mih jaboh: Ka jingmih jong ki jaboh ha kane ka jaka ha ka por ba sam thliew, pynbthei, pynkit bad pynhap mar. ▪ Ka jingmih jong ka jaboh na ki kali diesel kiba kit mar ha ka surok hajan par. ▪ Ka jaboh kaba mih na ka atoskhana jong ka jingpynpra maw, na ka jingpynlang ia u pui pui ha ki jaka ba pynkit mar ha u LBC bad na ka jingpyndonkam ia ki generator ba la thep da ka diesel. 	<p>Ka jingmih jong ka tdem ha kane ka jaka(ka jingthew kyllum lang da kaba pyndonkam da ka AERMOD model bad kaba la shu khein antad ia ka jingmih jaboh) ha ka jaka lane jaka sah sawdong ka long kumne harum:</p> <p>a) Ka PM₁₀ ka don 57.5 haduh 79.5 µg/m³ bad la pyniapher bad ka jingthew kaba la thew hapoh ka 24 kynta da ka NAAQS kata kaba long 100 µg/m³,</p> <p>b) Ka PM_{2.5} ka don 21.3 haduh 30.7 microgram per cubic meter (µg/m³) bad la pyniapher bad ka jingthew ba la thew hapoh ka 24 kynta da ka NAAQS kata kaba long 60 µg/m³,</p> <p>c) Ka SO₂ ka don 5.1 haduh 6.8 µg/m³bad la pyniapher bad ka jingthew ba la thew hapoh ka 24 kynta da ka NAAQS kata kaba long 80 µg/m³,</p> <p>d) Ka Nox ka don 10.8 haduh 13.5 µg/m³bad la pyniapher bad ka jingthew ba la thew hapoh ka 24 kynta da ka NAAQS kaba long 80 µg/m³,</p> <p>e) Ka CO ka don 213.5 haduh 426.0 µg/m³bad la pyniapher bad ka jingthew ba la thew hapoh ka 8 kynta da ka NAAQS kata ka long 2,000 µg/m³.</p> <p>Ka jingmih jong ka tdem kan long kat kum ki kyndon ba la buh da ka National Ambient Air Quality Standards (NAAQS) ha baroh ki jaka sawdong</p>	<p>Jingsamthliew bad Jinpynbthei</p> <ul style="list-style-type: none"> ▪ Ka jingpyndonkam ia ki kor kiba lah paka bha. ▪ ka jingpyndonkam ia ki tikli kiba bha. ▪ Ban set bha ia ki thliew ynda la dep pyndap ia ki tikli ▪ Ban synreit um ynda lah dep pynbthei. <p>Ka tiar pynpra maw bad u kor shalan maw(LBC)</p> <ul style="list-style-type: none"> ▪ Ki kor ba la shna ha kata ka rukom ban nym ailad ia u pui pui ban her than. ▪ Ka jingpyntreikam ia ka ki kor ba synreit um (Fogger System) ha ka por ba theh ia u mawshun ha ka kor tylliat maw. ▪ Hapdeng ka bynta ba rah ia u mawshun na kawei ka jaka sha kawei pat la pynbiang da ka kynja jingtap (hoods/chutes) ban lait mih u pui pui. ▪ Jingsynreit um ha ka bynta ba rah ia u mawshun na kawei ka jaka sha kawei pat. ▪ Ka kor kaba pyntuid ia u maw ka long ha ka dur ka nur ba la tap na ka bynta ban shalan ia u mawshun. <p>Jaka pynmih bor ding – DG Set</p> <ul style="list-style-type: none"> ▪ La pyndonkam da ka umphniang sulphur HSD kaba duna. <p>Ki kynton ne thup maw</p> <ul style="list-style-type: none"> ▪ Ka jingsynreit um ha kine ki jaka. <p>Par mawshun</p> <ul style="list-style-type: none"> ▪ Ka jingsynreit um da ki kynja suloi synreit umslap ha ka por ba pynkit bad pynhap mar; ▪ Jingthung bad jingpynbha ia ki dieng ha ka jingiar kaba 100m <p>Ka jingpynkit mar</p> <ul style="list-style-type: none"> ▪ Jingsynreit um da ki kor synreit um(sprinklers) bad ruh da kali kit um ▪ Ka jing sumar ia ki tiar ba pyndonkam ha ka jingtih mawshun ▪ Ka jingiaid sted ka kali hapoh 20km shi kynta (20km/h) <p>Ka jaka ba pyntreikam</p> <ul style="list-style-type: none"> ▪ Ka jingpyndonkam da ka jingiada khmat (kaba kyrpang) na bynta ban iada na ka jingrunng u pui pui, na ka bynta ki nongtrei ba trei ha ki jaka ba jur ka jinghap u pui pui. 	<p>Kaba duna</p>

2. Ka rukom long jong ka jingsawa			
<p>Ka daw jong ka jingsawa ha kane ka jingpyntreikam ia ka Projek ka kyntthup:</p> <ul style="list-style-type: none"> Na ka jingpyntreikam ha ka karkhana tih mawshun. Ka jingsawa kaba mih na ka jaka pynpra maw ka kyntthup ia ka jingsawa na ka karkhana pynpra maw, na ka jaka ba sdang pyniaid ia u LBC, na ka karkhana kaba pyntreikam ia ki tiar ne kali ba heh bad ba khia, na ka jaka set kali. Ka jingsawa ka mih ruh na ka kamra ba buh ia ki generator diesel. Ka jingiaid jong ki kali bah eh bad barit bad ka jingshalan ia u mawshun da u LBC 	<p>Ka jingmih jong ka jingsawa ha kane ka jaka(ka jingthew kyllum lang da kaba pyndonkam da ka Sound Plan model bad kaba la shu khein antad ia ka jingsawa mynsngi bad mynmiet) ha ka jaka lane jaka sah sawdong ka long kumne harum:</p> <ul style="list-style-type: none"> Ka jingsawa ha ka por mynsngi bad mynmiet ha ki jaka sawdong ki don katkum ki kyndon kata 55dBA na ka bynta mynsngi bad 45 dB(A) na ka bynta mynmiet. Ka jingsawa ba wan na u LBC palat 300 ka dei ban long katkum ki kyndon ba lah buh 	<ul style="list-style-type: none"> Dei ban ai jingdro kaba kyrpang na ka bynta ban sam thliew ban pynbthei ia u maw. Ka jingpyntreikam da ki NONEL bad ki tiar pynbthei TLD (detonators) Ka por ban pynbthei kan dei ba long hapdeng ka 1baje haduh 3pm mynsngi. Da kaba sumar bad pynkhuid bha ia ki kali /kor ba pyndonkam ban tih mawshun katkum ka OEM. Ka jingkhmih na ka por sha ka por ia u LBC bad ban bujli noh ia ki idler (kynja shaka ba iarap ban pyniaid ia u belt) Da kaba iada ne ker ia ki kali/kor tih mawshun na ki jingsawa ban rung shapoh kali. Da kaba pyndait napoh ka tiar pynpra maw ba thymmai da kino kino ki kynja kynphad ban iada na ka jingkynter ne jingkhynniuh. Da kaba pynbiang ban set ia ka jingsawa sawdong ba mih na ki diesel generator. Da kaba pyndonkam ia ki jingiada shkor Da kaba thung bad peit bha ia ki dieng phyrngop 100 m sawdong ka par. 	Kaba duna
3. Ka jingkhynniuh ka madan, ka jingjur ka lyer bad ka jingsied ki maw			
<p>Ka jingpynbthei da kaba pyndonkam ia ki tikli kiba khlain ka dei ka daw tynrai jong ka Ka jingkhynniuh ka madan, ka jingjur ka lyer bad ka jingsied ki maw</p>	<ul style="list-style-type: none"> Ka jingkhynniuh ka madan kan duna katkum ki kyndon ba la buh ka Directorate General of Mine and Safety (DGMS) kata haduh 10 mm/sec (na ka bynta 8 haduh 25 Hz frequency). Ka jingjur jong ka lyer ka don hapoh ka limt kaba 134 decibel Linear (dbL) kaba katkum ka kyndon ba la buh da ka DGMS. 	<ul style="list-style-type: none"> Ka donkam ban bishar bniah ia ka jingjngai jong uwei u lain na uwei pat u lain ha kaba la tih ia ki thliew, ka jingjngai na kawei ka thliew sha kawei pat bad ka jingpyndap iaki thliew da ki shyiap bad kiwei de khnang ban nym jur ka jingsied jong u maw ha ka por pynbthei ha baroh ki jaka ba sam thliew. Khnang ban set ia ka jingsied u maw ha ka por pynbthei, ka jingjyliew jong ka thliew ha kaba yn thep ia u shyiap bad kiwei de kam dei ban duna ia ka jingjngai hapdeng shi lain ha kaba ki don ki thliew bad ia ka jaka pynbthei dei ban tap ha ka por ba pynbthei ia ki tduh jong ka par. Ia ki jingpynbthei dei ban leh ha ka por mynsngi bad ruh ym dei ban pynbthei ha ka por ba ka lyer ka beh jur lane pom pyrthat Ki tiar ba pynbthei kam dei ban palat 63kg kawei ka thliew bad da ka bud ia ka jingthew ba la ai da ka DGMS. Ban pyntikna ba ha ka por ba tih mawshun ha ki bynta ba shathie (kata 300m na ka pud kaba shathie), ia ka rukom pynbthei la aiti biang ban bishar bniah da ka CIMFR. Wat la katta, yn nym pynkhih ia ki jaka kiba 100m sawdong hajan kine ki thliew. Ki shmong ba don sawdong ka par bad ki jingtei ba marjan, yn peit bniah man la ka por ioh don kano kano ka jingorpait ha ki kynroh lane jingkylla jong ki krem bad ki thliew um kiba pynieng 	Kaba duna

4. Ka jinghiar jong ka khyndew (Land Subsidence)		
<i>Ka jinghiar ka khyndew ha ka par kaba la pynlong na ka daw jong ka mariang lane ki jingtrei jingktah jong u khun bynriew.</i>	<i>Katkum ka jingwad bniah ka CIMFR ,na kine ki saw tylli ki daw kata i) ka jingdon jong ki thliew ha ki par ba rit. ii) ka jinduna ki mawrit ki shyiap halor ka par ki bym don jingmyntoi iii) ka jingsangeh ka jingpynbthei ia ki par iv) Ka jingsam thliew ka um la shem ba ki jingdon ki thliew shapoh ka par ka long kaba duna bha .</i>	<ul style="list-style-type: none"> ▪ <i>Ka jingleit khmih ba man la ka por haba don ka jingsam thliew.</i> ▪ <i>Ka LUMPL kan pynlong ka jingsam ia ki 32 tylli ki thliew rit hapoh kine ki arsnem ban wan ha ki jaka ba lah mynjur da ka IBM khnang ban wad ia ki jingdon ki krem mawsiang /thliew hapoh ka par.</i> ▪ <i>Ka LUMPL ka dei ban ioh jingkhein halor ka jinghiar ka khyndew la kummo kumno shi sien san snem na ki bor ba dei peit ba la lum jingtip halor kane ka phang kum na ka CSIR-CIMFR.</i> ▪ <i>Pyndonkam da kaba shon dur ba lah ban pyntikna ia ka jingdon bad jingjngai jong ki thliew rit thliew syar</i>
		<i>Kaba duna.</i> <i>Donkam ban tohkit shuh shuh halor kane ka jingiohlum jingtip kaba indei bad ka jinghiar ka khyndew.</i>
5.Ka jingpyndonkam ia ka jaka		
	<ul style="list-style-type: none"> ▪ <i>Ka jingpynneh ia kane ka Projek ka nym wanrah ia ka jingkylla ha ka rukom long ka khyndew namar ym shim don kano kano ka jingthmu ban shim jaka shuh lait na kaba la mang bad mynjur (2.0 MTPA)</i> ▪ <i>Ka jaka ba lah tih mawshun kan kylla na ka jingthew kaba 170 m RL sha ka 90 m RL lada ngi pynmih mawshun uba 5.0 million shi snem ne 2.0 million shi snem.</i> ▪ <i>Hynrei lyngba ka jingsangeh treikam bad hadien jingkhang noh jong ka par lah ban pyndonkam ia kane ka jaka da kirwei kiwei ki rukom</i> 	<ul style="list-style-type: none"> ▪ <i>Yn sdang treikam ban pynbha ia ka par ha ki bynta ba shajrong ha ka snem kaba hynriew shakhmat. (naduh ban sdang pyntreikam ia ka jingpynmih mawshun ba 5.0 million tonne shi snem)</i> ▪ <i>La pynneh ia ka jinglong khlaw kaba 100m sawdong ka par katkum ka jingdonkam jong ka Environmental Clearance ba la ai da ka MoEFCC</i>
		<i>Kaba duna</i>
6. Ka rukom tuid jong ka um (ha ka por ba pynroi ia ka par, ka jingtih mawshun bad ruh hadien ba la khang noh ia ka par)		
<i>Ka Projek ka don hajan ka jaka ba pynlang umslap jong ka wah Phlangkaruh bad shi bynta hajan ka jaka ba pynlang umslap jong ka wah Umiam kaba ker ia bynta kaba shatei jong ka par ryngkat bad ka wah ba tuid na ka bynta kaba shatei shabar ka par. Kine ki par ki kynthup lang bad kito ki par ba don ki mawshun kiba mih shabar ka khyndew (Karst topography) bad ka jingtuid sted ka um ha ki jingiadait, ki khap bad ki jingorpait. La iohi ba kane ka jingwan rung ka um ka lah ban kut noh namar ba ka tuid sha ka phang ba shatrai jong ka par.</i>	Ha ka por ba pyntreikam ia ka par <ul style="list-style-type: none"> ▪ <i>Haduh u snem uba 21 jong ka jingpynmih mawshun kaba 5.0 million ton shi snem , ka umslap kan iai tuid na ka par sha ka bynta ba shatei shaduh shathie ha ka jingkhein kaba 0.7km2 eiei sha ka jaka pynlang umslap ha wah Phlangkaruh bad kaba sah kata 0.3km2 kan iai tuid na sepngi sha mihngi(jong ka par) sha ka wah Umiam.</i> ▪ <i>Katba dang ia id ka jingtih mawshun, kumjuh ruh da kaba khmih lynti ba baroh ka um slap kaba tuid ha ka par maw lah ban khang bad pynmih noh (silt traps) , kan nym don kano kano ka jingktah namar ka um ba</i> 	<ul style="list-style-type: none"> ▪ <i>Ka LUMPL ka la thmu ban shna ia ki nur ba lah ban pyntuid ia ka umjaboh shurwa ban pynbha bad pynkhreh ia ki jaka tih kiba thymmai;</i> ▪ <i>Shurwa ban sdang tih ia ka par na ka phang kaba shatei (u snem uba 21 haduh u snem uba 25), yn hap ban pynkylla ia ka jingtuid jong ka umjaboh lyngba ki nur na shaphang shatei ha kaba ka LUMPL ka donkam ban shna ia ki nala tuid um kiba jar noh ia ka jaboh (garland drain) ban pyntuid ia ka umslap ba kan tuid na shabar ka par ba kan bteng ban tuid na sepngi sha mihngi sha ka wah Umiam. Kane ka nala kan iada ia ka umslap ban tuid shapoh ka par bad kan iarap ban bteng ia ka jingtuid ka um na ka par sha ka wah Umiam.</i> ▪ <i>Na bynta ka jingpynbha ia ka par, naduh ka snem ba 11 shakhmat, yn donkam ban shna ia ka nala kaba lah ban jar noh ia ka jaboh (garland drain) kaba tuid na shaphang shaneng- sha trai hapoh ka bynta kaba shapdeng jong u pud uba sha mihngi ryngkat bad ka jingshna ia ki jingsden um khnang ban lait na ka jingtuid jong ka</i>
		<i>Kaba duna (hap donkam ban khein biang katkum ka jingmynjur jong kiba dei peit ia kane shurwa ba u mawshun un lut noh na par)</i>

	<p>lah pynkhuid ka tuid beit lyngba ki nala ba mih sha ka Wah Phlangkaruh.</p> <p>Hadien ka jingkhang noh ka jingtih mawshun :</p> <ul style="list-style-type: none"> ▪ Kan don ka jingnoh rashing ba khyndiat sha ka bynta ba shathie ha ka par maw halor ka jingtuid jong ka wah Phlangkaruh 	<p>jaboh katkum ba la kyntihup lang ha ka jingthmu ban shna ia kine na bynta u snem uba 11 haduh 15, 16 haduh 20.</p> <ul style="list-style-type: none"> ▪ Na ka bynta ka jingpynbha bad ka jingpyntreikam ia ki bynta kiba sha trai jong ka par, ka LUMPL ka donkam ban shna ia ki jingsden um (bunds) narud ter ter ki jaka tih khnang ba ka um kan tuid beit bad ban iada na ka jingshlei um hapoh ki jaka ba long madan ha kine ki jaka tihmaw. ▪ Ban pyntikna ia ka jingshna ia ki jaka kiba nohrashing shajan ka jaka kaba sha trai duh khnang bay n nym don jingthut ha ka por ba ka um ka tuid na shaphang shaneng sha shaphang sha trai duh na ka par. Dei ban shna ruh ia ki jingtap ban tap shuwa ba ka um kan shlei bad tuid sha ki thliw kiba don shaphang sha trai duh jong ka par; ▪ Ban pyntikna ia ka jingshna ia ki jaka kiba nohrashing shajan ka jaka kaba sha trai duh khnang ban nym don jingthut ha ka por ba ka um ka tuid na shaphang shaneng sha shaphang sha trai duh na ka par. Dei ban shna ruh ia ki jingsden um shuwa ba ka um kan shlei bad tuid sha ki thliw kiba don shaphang sha trai duh jong ka par; ▪ Ban pyntikna ban pynkhuid shisien artaiew ia kine ki jingtap bad ki jingsden um, khamtam eh ha ka por slap kata ka long naduh u bnai Jymmang haduh shiteng bnai jong u bnai Risaw. ▪ Shuwa ban khang noh ia ka par, ka LUMPL kan pyntikna ban pyntreikam ia kine ki lad bad ki rukom pynduna: ▪ Peit bniah biang ia ka jingthmu ban pynkylla ia ka jaka kaba ym pat pyndonkam kaba don kumba 67 Ha sha ka jaka pynlang um(water reservoir) naba ka don ha ka, ka jingma jong ka jingkitkhia palat ka um. Ka LUMPL ka dei ban khmih bad wad noh da kiwei pat ki lad ki lynti ban pyndonkam ia ka jaka katkum ka jingiasyllok lang bad ki brieu ba dei peit katkum ka jingiamynjur jong ka IBM. <ul style="list-style-type: none"> ○ Pymiasoh ia ka um kaba tuid lyngba ki kynja jingsden um ba kan tuid sha ka nala ka ba tuid shaphang shatrai duh na ka jaka kaba la mang na ka bynta ka ophis jong kane ka Projek ba kan tuid sha ka nala kaba poi sha wah Phlangkaruh. 	
<p>7. Ki tyllong um ha ryngkew bad ka jingpyntuid ia ka um</p>			
<ul style="list-style-type: none"> ▪ Ka jingtan um kaba 200 m3/ shi sngi na wah Phlangkaruh lane wah Umiam na ka bynta ka jingdonkam jong ka Projek ▪ Ka jingmih jong ka umjaboh na ka jingpyndonkam kaba man la ka sngi kaba long kumba 60 m3/shi sngi. 	<ul style="list-style-type: none"> ▪ Bad ka jingdon jong ka um ba tuid ryngkat bad ki ba pyndonkam duna ia ka um shaphang sharum jong ka wah Phlangkaruh ka jingktah na ka jingtan ia ka um na Phlangkaruh la khmih lynti ba kan duna. ▪ Ka jingktah jong ka jakhlia ba mih na ka um iing bad karkhana ka long kaba duna . 	<ul style="list-style-type: none"> ▪ Ban khmih barabor ia ka jingpyntreikam ia ki STPs bad ETP bad dei ban khmih bniah ruh kumjuh ia ka rukom long jong ka um kaba lah dep pynkhuid bad ka bym pat dep pynkhuid. ▪ Ban pyndonkam biangbad synreit ia ka um ba lah pynkhuid ha ka lynti ba kit mawshun. ▪ Ban pyndonkam biang ia ka um slap ba lah pynkhuid ha ki kam iing. ▪ La bthah ia ki nongtrei ha ka par ban pyndonkam bha ia ka um 	<p>Kaba duna</p>

<ul style="list-style-type: none"> ▪ Ka jingmih jong ka umjaboh kaba long 10m³/shi sngi. 			
8.Ka jingjaboh ka um na ka daw ka jingtuid ka jaboh na par			
<ul style="list-style-type: none"> ▪ Ka jingtuid u khyndew na ki surok kit mar ▪ Ka jingtuid jong ka khyndew na ka par ba dang sam thliew bad pynbthei. ▪ Ka jingtuid ka jaboh na ki karkhana shna kali. ▪ Ka jingmih jong ka jaboh na ki kor, ki jingtei ha ka por ba pynsangeh treikam ia ka. 	<p>Ha ka por ba pyntreikam ia ka par</p> <ul style="list-style-type: none"> ▪ Kan duna bha ka jingktah na ka jingtwa ka khyndew ne kino kino ki jingpynwit.. ▪ Ka jaka ba don ka par kam don kano kano ka jaboh kaba tap na jrong, ka don ka jingum noh jong u mawshun na ka daw ka jingsam ka um. ▪ La lap ba namar ba une u mawshun u long uba eh bha bad u hap hapoh ki jaid maw ki bym lah ban pyntwa ,u mawshun marwei hi un nym long ka daw ban pynmih ki shyiap ba rit. ▪ Ka jingdon jong kine ki jaboh la khmih lynti ba kin don kham duna ia ka 1 m3 (uba rkhiang) kiba lah ban twa noh na ka daw jong u slap <p>Ha ka jingpyntreikam na bynta ban khang noh ia ka par</p> <ul style="list-style-type: none"> ▪ Ynda la dep khang ia ka par, ka jingtuid jong ka jaboh kan kham duna namar ba la dep pynkhuid ia ka madan 	<p>Ha ka por ba pyntreikam ia ka par</p> <ul style="list-style-type: none"> ▪ Ka jingtih ia ki kharai kiba jylliew ban jar noh ia ka um shuwa ba kan tuid sawdong ka par (Garland drains) kiba la tih kyrpang na ka bynta ka por ba ka um ka heh bha. Yn shna ruh da ki jingsden um (Check trap) ban kah ia kine ki kharai ba don ka um jaboh. ▪ Kine ki jaka ba pyntih mawshun la shna ha kata ka rukom ha kaba la pynnoh rashing ia ki khnang ba nym lang ka um hajrong bad tuid shisyntuid bad ban iada ia ka um ba kan tuid kynsan. ▪ Ia u khyndew ba narud ka par mawshun lah ban pyndonkam biang ha kaba thung ba rep. ▪ Yn synreit da ka um bad yn pyndonkam da ka rukom pynskhem (Compaction) ia ka surok kit mar. ▪ Yn tei ruh da ki kynroh narud ki jaka ba la dep pyntih ia u mawshun .Dei ruh ban tei kynroh ha ka bynta ba shathie jong u pud. ▪ Yn tih ia ki nala ha ka jaka ba pyntih thymmai ia u mawshun bad ha ki surok kit mar. ▪ Yn thung da ki dieng phyrngop narud ki nala jar um (Garland drain) shapoh bad shabar jong ka par. <p>Hadien ba lah khang noh ia ka par</p> <ul style="list-style-type: none"> ▪ Ban pyntreikam na ka bynta ban khang noh ia ka par tang ha ki por bym slap. ▪ Pyniasoh ia ka um kaba tuid lyngba ka jingpyndonkam da ki jingsden um ba kan tuid sha ka nala ka ba tuid shaphang shatrai duh na ka jaka kaba la mang ban pynlong ka ophis jong kane ka Projek ba kan tuid sha ka wah Phlangkaruh. ▪ Ban pyntikna ia ka jingpynkhuid kaba shi sien ar taiew ia ki jingtap bad ki jingsden um, khamtam eh ha ki por slap kata ka long naduh u bnai Jymmang haduh shiteng bnai jong u Risa 	<p>Ha ka por ba pyntreikam ia ka par : kaba duna</p> <p>Hadien ba lah khang noh ia ka par: Ka bym long eiei.</p>

9.Ka jingpymih jakhlia & ka khyndew kaba najrong bad u shyiap ne mawria			
<p>Ka daw jong ka jingktah ia ka khyndew bad ka um kadei na ka daw jong ka jingjaboh jong ka khyndew ka kynthup ia kine ha rum: -</p> <ul style="list-style-type: none"> ▪ Ka jingbymnang ban rah, jinglum bad jingbret ia ki jakhlia ba hapoh iing ne na karkhana. ▪ Ka jinghap kulmar ka jaboh kum ka umphniang ba la pyndonkam bad ka bir ETP. ▪ Ka jinghap kulmar ka umphniang diesel bad kiwei jaka buh umphniang. ▪ Ka jingpyntuid ia ka um jaboh- kaba mih na ki jaka sah bad na ki karkhana. 	<ul style="list-style-type: none"> ▪ Lada ym bret bha ia ka jaboh ba mih na ki iing ka lah ban ktah ia ka koit ka khiah jong ki nongtrei ha par bad ia ki nongshong shnong shajan ka par. ▪ Ki jaboh kiba ktah ia ka mariang bad ki jingdon jong ka ki kynthup ia ka umphniang ba la dep pyndonkam, ki kynja umphniang kiba pyndonkam haba pump um, ka diesel, ki jain rit ba niad khlein bad umphniang. Lada bret kulmar ia kine, ki lah ban pynjaboh ia ka jaka,bad ktah ia ka jingsngur ka um ,ia ka koit ka khiah ki briew kiba pyndonkam ia ka um. 	<ul style="list-style-type: none"> ▪ Da kaba pynlang,buh la ka jong bad bret bha ia ka jaboh kaba mih na ki jaka shong jaka sah jong ki nongtrei. ▪ Ban nang bteng ban rah ia kiwei kiwei ki jaboh kiba mih na ki jaka shong jaka sah bad na ka par ban leit bret sha ki tin ba la pynbiang da ka Shillong Municipal Waste Collection. ▪ Ka jingbret ia kine ki jaboh ba ktah ia ka mariang (hazardous wastes) ka long katkum ka jingioh hukum na ki kynhun ba lah ithuh da ka MSPCB. 	Kaba duna.
10.Ka jingwad jingtip shaphang ka um kaba napoh khyndew bad kaba tuid ha madan			
<ul style="list-style-type: none"> ▪ Ym don kawei ruh ka umpohliw lane ki tyllong um hapoh ka jaka ba don ka par. ▪ La shem ba don lai tylli ki umpohliw 22 m RL hajan ka surok PWD shaphang sha trai duh jong ka par 270 m na u pud uba sha trai duh jong ka par. Ki wahduid ki tuid na jrong bad mih shatrai jong ki lum ha Nongtrai; ▪ Ka Phlangkaruh ka long kawei na ki barat tam ki wah kaba don hi laka jong ka nur shaphang sha trai duh jong ki lum. 	<ul style="list-style-type: none"> ▪ Ka jingtih mawshun ka long tang haduh 90 m RL hajrong ka jingdon ki umpohliw ba 20 M RL bad ha ka jingjngai ba 300 m na ka jaka tih mawshun. ▪ Katkum ka jingthew ba la thew da ki piezometer la lap ba ka um ka don kham hajrong ki umpohliw ha Phlangkaruh. Kane ka thew ba ka jingtih mawshun kam shim da ktah than ia ka jingtuid jong ka um sha ki umpohliw kiba don sha khlieh duh jong ka wah Phlangkaruh. ▪ Ka jingpynbthei maw ka lah ban pynthud ia ka jingtuid jong ka um kaba tuid hajrong bad kaba tuid shapoh. Hynrei da kaba pynduna noh ia ka jingtih mawshun haduh 90 m RL, ka jingktah ia ki umpohliw bad ka um kaba tuid ha madan kan kham duna. 	<ul style="list-style-type: none"> ▪ Katba dang tih shatrai jong ka par, kata kaba long 300 m shajrong jong u pud shatrai, yn hap ioh ia ka jingmyrjur da ki rukom ban pynbthei ynda lah wad jingtip bha da ka CIMFR. ▪ Yn nym ktah lane pynwit ia ka jaka kaba ker 100m pyllun jong ka thliw (sinkhole) ▪ Da kaba bud ia ki rukom pynduna jong ki jingma kiba mih na ka jingpynbthei ▪ Ban nang bteng ban pyndonkam ia ki thliw ne ki jaka ba pynlang um na bynta ban thung ban rep. 	Kaba duna

11. Ki jingthung, ki mrad, ki briew bad ka jingiadei jong ki bad ka jaka ,bad ka jaïd mrad khlaw(Ecology and Wildlife).			
<p>Ia ka jaka ba don ka par la kdew ba ka long ka jaka khlaw. Ka LUMPL ka la ioh jingbit na ka bynta ban pyntreikam ha ka jaka ba 116.580 Ha ban pynmih 2.0 MTP.A Lyngba ki jingwad jingtip ba dang shu pynlong dang shen katkum ka Flora & Fauna Report jong ka NEHU, 2015 (kaba iadei bad ki jaïd jingthung bad ki jaïd mrad kiba don ha ka mariang), la lap ba don hynriew tylli ki jaïd khlaw kiba don ha kane ka jaka. Yn nym donkam jaka khlaw shuh na ka bynta ban pynmih 5.0 MTPA.</p>	<ul style="list-style-type: none"> ▪ Ka jingktah ia ki jingthung, ki mrad, ki briew bad ka jingiadei jong ki bad ka jaka bad ka jaïd mrad khlaw ki long kumne harum: <ul style="list-style-type: none"> ○ Ka jingktah ia ki jaka khlaw bad ka jingduh noh ia ki jaka thung, ki jaka shong jaka sah ki briew bad ki mrad; ○ Ka jingktah ia ki tyllong um bad kiwei kiwei kiba iahap bad kine; ○ Ki jingktah na ka daw jong ka jingmih ki jaboh; ○ Ka jingktah jong ka jingsawa bad ka jingpynthud ia ki briew bad ki mrad; ○ Ka jingktah jong ka jingiaid ki kali; ○ Ka jingktah jong ka jingmih u pui pui ha ki jingthung, ki jaka thung, ki jaka shong jaka sah jong ki briew, ki mrad bad kiwei kiwei de; ○ Ka jingktah ia ki jaïd mrad kiba don ha ka jingma ban duhjaïd noh; bad ○ Ka jingktah ia ki jingioh na ka mariang kiba don ha kane ka jaka da ka jingpyntreikam ha ka par. ▪ Ka jaka ba don ka par ka long kum ka jaka bym long khlaw shuh namar ba bun na ki dieng kim mih bha na ka daw jong ka jingbymdon jong u jaïd khyndew uba pynim ia ki jingthung. ▪ Bun na ki jingktah kiba la lap ki long kiba duma bad kiwei pat kiba shu biang. Na ka bynta ban pynduna ia ka jingktah, la ioh katto katne ki lad bad ki rukom ban pynduna 	<ul style="list-style-type: none"> ▪ Ia ka khyndew kaba dang lah ban pyndonkam kaba la ioh na ki jaka kiba la orpait bad na ki thliw kiba don ha ki jaka kiba shajrong, yn sumar da kaba buh bha ia ka na ka bynta ban pyndonkam ha ka por ba pynbha biang ia ka par bad ha ka jingthung ia ki diengphyrngop; ▪ Ka Flora & Fauna Report jong ka NEHU, 2015 ka la ai jingmut ban thep shuh sa INR 30 lak tyngka na ka bynta ban pyntreikam ia ki rukom pynsah pynneh ia ki jaïd sim jaïd doh ha kane ka jaka da kaba buh da kumno ruh 500 tylli ki synduk ba don u skum sim. ▪ Ban pynbteng shuh shuh , la don kam ruh ka jaka sumar ia ki jingthung na ka bynta ban thung ia ki dienglung ha ki jaka shajan ka par bad ha ki jaka ba thung ia ki dieng phyrngop lynter sawdong ka par (greenbelt). ▪ Ban bteng ia ka jingai jinghikai na ka bynta ban pynneh pynsah ia ka jingkhuid ka mariang bad kumjuh ruh ban bud ruh ia ki lad bad ki rukom ban pynduna ia ka jingktah. ▪ Ka jingpynbha biang ia ka par yn nang bteng ban shimti, ka ban sdang naduh u snem uba 6 ter ter. Ia ka par yn lah ban pynbha biang pura shuwa ban khang noh syndon ia ka. ▪ Ia ka jingkhang noh ia ka par yn sdang 5 snem shuwa ban khang ia ka. Ia ka jingthmu ban khang syndon ia ka par yn pynkhreh lyngba ka jingiasyllok lang bad ki dorbar shnong bad ka jingioh jingmynjur na ki bor ba dei peit katkum ka Sustainable Development. ▪ Yn kham pynbiang da ki jaka bret niut ha ki jaka sah jong ki nongtrei khnang ban kiar na ka jingbret pathar ia ka jaboh ha ki khlaw bad ki jaka ba don um. 	<ul style="list-style-type: none"> ▪ Ka jingktah kyllum lang ia ki jingthung, ki mrad, ki briew bad ka jingiadei jong ki bad ka jaka ryngkat lang bad ka jingktah ia ki mrad khlaw ha ka por ba pyntreikam ia ka par na bynta ban pynneh ia ka Projek, la kheïn ba ka long kaba duna(Minor). ▪ Ka jingktah kyllum lang ia ki jingthung, ki mrad, ki briew bad ka jingiadei jong ki bad ka jaka ryngkat lang bad ka jingktah ia ki mrad khlaw ha ka por ba pyntreikam ban khang noh ia ka par bad ynda lah dep khang ia ka, la lap ba ka long ka bym pat da ktah (Positive).
12. Ka ioh ka kot ha ka imlang sahlang bad ka jingkoï jingkhiah bad jingiada ia u paidbah			
<ul style="list-style-type: none"> ▪ Na ki jingpyntreikam ha ka jaka; ▪ Ka koit ka khiah bad ka jingiada ia u paidbah; ▪ Ka jingkyrshan ia ki kam kiba iadei bad ka koit ka khiah bad ka pule ka puthi; 	<p>Ha ka por ba pyntreikam ia ka par</p> <ul style="list-style-type: none"> ▪ Khlem don ka jingbuh dorkhas na bynta ka jingdonkam jaka shuh bad na kane ka daw, la khmih lynti ba kan nym don kano kano ka jingktah ha ka imlang sahlang. ▪ Baroh ki shnong kiba ker sawdong ia ka Nongtraï Limestone Mine bad kiwei ki jaka ba 	<p>Ha ka por ba pyntreikam ia ka par</p> <ul style="list-style-type: none"> ▪ Ka jingpynbiang ia ki kam kiba iadei bad ka koit ka khiah bad ka pule ka puthi: Ka LUMPL ka don bynta ha ka jingai jingkyrshan kaba iadei bad ka liang ka koit ka khiah bad kumjuh ruh ia ki kam kiba iadei bad ka jingpynkiew ia ka jingnang jingstad ha ka liang ka pule puthi ha Nongtraï, Shella bad kiwei kiwei ki shnong kiba shajan. 	<p>Kaba Bha</p>

<ul style="list-style-type: none"> ▪ <i>Ki lad thep kam thep jam;</i> ▪ <i>Ka jingsiew baiwai (khajna) sha ka dorbar Nongtraï bad ShellaKa jingsiew sha ka SPV bad ka jingpynbha ia ki jingtei kiba shajan</i> 	<p><i>iadei bad kane ka kam ki long kham pajih ha ka jingjngai kaba 1 km shaneng na ka jaka ba don ka par. Yn kham pynduna ia ka jingktah ha ka jingkoit jingkhiah bad ia u paidbah kaba mih na ka daw jong ka jingpynheh ia ka Projek, da kine ki ki lad bad ki rukom.</i></p> <p><i>Ka jingsangheh treikam bad hadien jingkhang noh jong ka par</i></p> <ul style="list-style-type: none"> ▪ <i>Ynda la dep khang noh ia kane ka par bad kiwei kiwei ki jaka kiba iadei bad kane ka kam, yn pynpra noh ia ki tiar bad ki kor ba la dep pyndonkam bad yn die noh ia ki bad yn pynbha biang ia kane ka jaka da kaba pyndonkam da ki rukom pynbha katkum ka Mine Closure Plan (kaba pyntreikam ban khang noh ia ka par) kaba la ioh ia ka jingmynjur jong ka IBM.</i> ▪ <i>Ia ka jaka kaba lah dep pynbha biang bad ia kiwei kiwei de ki jaka kiba la pyndonkam ha ka jingpyntih mawshun, yn pynphai biang sha ki Dorbar jong ka Nongtraï bad Shella.Kumta, ka jingkhang noh ia ka par kan don jingmyntoi.</i> <p><i>Hynrei, katkum ba la iohi, ynda la khang noh ia ka par, katto katne ki jingsiew sha ki nongshong shnong bad SPV kin sa kut noh bad kane kan ktah ia ka ioh ka kot ha ka imlang sahlang.</i></p>	<ul style="list-style-type: none"> ▪ <i>Ki lad thep kam thep jam: La khmih lynti ba kan myntoi shibun ha ka liang ka jingplie lad ban thep kam thep jam.</i> ▪ <i>Ka jingsiew bai wai (khajna) sha ka Dorbar Shnong Nongtraï bad Shella</i> ▪ <i>Ka jingsiew sha ka Special Purpose Vehicle (SPV):</i> ▪ <i>Ka jingsangheh treikam bad hadien jingkhang noh jong ka par Ia ka jaka kaba lah dep pynbha biang bad ia kiwei kiwei de ki jaka kiba la pyndonkam ha ka jingpyntih mawshun, yn pynphai biang sha ki Dorbar jong ka Nongtraï bad Shella.</i> <p><i>Ban kham pynduna ia ki jingktah ka ioh ka kot ha ka imlang sahlang na ka jingkhang noh ka par bad na ki jingmyntoi ba ioh na ka Projek, ka LUMPL kan ai jingtip bad iakren bad kiba peit iaka pisa pilain kiba iadei bad ka par da long kumno kumno ruh san snem shuwa ban khang ia ka par</i></p>	
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K) Ki jingtah ba la kyllum lang

90) Ym shim don kano kano ka jingpyntreikam tih maw shajan ka Nongtraï Limestone Mine. Ka LUMPL ka don ia ka jaka par ba la shim wai kaba don 4.9 Ha ha kaba lah ban pynmih 0.3 million ton shi snem kaba don 0.6 shaphang sha thie lam mihngi jong ka Nongtraï Limestone Mine. Ia kane ka par la khang naduh u 2009 na ka daw ba ym pat tikna ba ka jaka khlaw ka don katno. Na kane ka daw, la lap ba kam shim don kano kano ka jingtah haba khein kyllum lang.

L) Ka pynshong nia ia ki jingma na ka jingtah ka tih mawshun.

- 91) Ka jingkhein bniah ia ki jingma jong ki jingtah la pynmih na ka bynta ka jingpyntreikam ha ka jingtih mawshun bad kiwei ki kam ba iahap bad kane. Ia ka jingkhein jong ka jingma kaba mih na ka jingtah jong ki jaboh kiba mih na ka jingpyntreikam kaba don bun jingma , ka jingma na ka daw jong kano kano ka jingpyntreikam, ne ki bynta jong ka jingtreikam, katkum kane ka jingkhein, la pynbiang da ki lad ba la batai ban pynduna ia ki jingma. Katto katne ki jingma kiba lah ban mih na ka par na ka daw jong ka jingpyntreikam ha ka jingtih mawshun bad ha ka jingpynneh ia ka Projek la ithuh ryngkat lang bad ki daw kiba lah ban pynmih ia ka jingtah. Ia ki jingma la khein da kaba kham peit bniah ia ki jaboh kiba mih ynda la dep pyntreikam bad khein pat ia kane katkum ba la buh ha ka 'As Low as Reasonably Practicable' (ALARP). Khnang ban kham pynduna ia ka jingjur jong kawei pa kawei ka jingma, la pynmih da ki rukom pynduna ia ka jingtah ha kaba la kynthup lang ia ka ki rukom ban kiar bad ki rukom ban ialeh ban pynduh ia ki jingma.
- 92) Na ka bynta ki jingma kiba mih kiba khlem poi pyrkhath, la don katto katne ki rukom pynduna ba la buh lupa da ka Project ha kaba iadei bad ki jingma kiba mih na ka jinglong jong ka mariang bad ka suin bneng. Hynrei ka long kaba eh ruh ban batai shaphang ka jingma bad ka jingjur jong ka namar ba kadei kaei kaei kaba ym pat tip lupa. Lada don kum kata ka jingjia, la pynbiang lupa da ka Emergency Response Plan na bynta ban pyntreikam ban pynduna ia kino kino ki jingma kiba don shapoh ne shabar jong ka par.

M) Ki jingiohnong na ka Projek

93) Ki jingiohnong na ka jingpyntreikam ia kane ka Projek ka kynthup ia ka jingpynbha ia ki jingtei bad ka jingplie lad na ka bynta ki nongshong shnong. Ki jingiohnong ha kaba iadei bad ka pisa ka tyngka ka long kumne harum:

Table 0.1 Ka jingiohnong na ka Projek (Million)

S. N.	Ki jingsiew	Ka jingpynshongdor (INR)	Ka jingsiew shisnem (2.0 MTPA) (INR)	Ka jingsiew shisnem (5.0 MTPA) (INR)
1	Ka jingsiew sha ka Dorbar Nongtraï	13/ tonne	26	65
2	Ka jingsiew sha ka Dorbar Shella	Ba la siew kyllum lang	10	10
3	Ka bhah ka sorkar jylla	80/ tonne	160	400
4	State Mineral Cess (ka bhah kaba ai sha ka sorkar jylla kaba iadei bad ki mar napoh khyndew	40/tonne	80	200
5	Ka jingsiew na ka bynta ka jingpyndonkam ia ka SPV (Special Purpose Vehicle)	90/ tonne	180	450
6	Ka bhah kaba ia dei bad ka imlang sahlang ba la siew ia ka Welfare & Cess Commissioner (Ministry of Labour)	1/ tonne	2	5
Total (1 to 6):			458	1130
Ong kumba			45.8 Crore	113.0 Crore

N) Ka jingthmu ban iada, sumar bad khmih bniah ia ka mariang.

94) Ka rukom pynneh bad khmih bniah ia ka mariang (EMP) la pynmih katkum ki jingdonkam kiba kynthup ia ka Planning (Ka jingthmu), Implementation (ka jingpyntreikam), Checking (ka jing khmih bniah) bad ka Review (ka jingkhmih arsiem) khnang ban pyntikna ba kan don ka jingkieu barabor ha ka jinglong ka mariang. Ka EMP ka batai shaphang ka Environment Policy (kaba iadei bad ka mariang) jong ka Group Health and Safety Rules jong ka LUMPL (ka ain kaba iadei bad ka koit ka khiah), Group's Sustainability Ambition, 2020 bad ka la batai shaphang katto katne ki jingdonkam, Ki jingtreikam na bynta ka mariang, ka jingia da ia ka jingkoit jingkhiah bad ka imlang

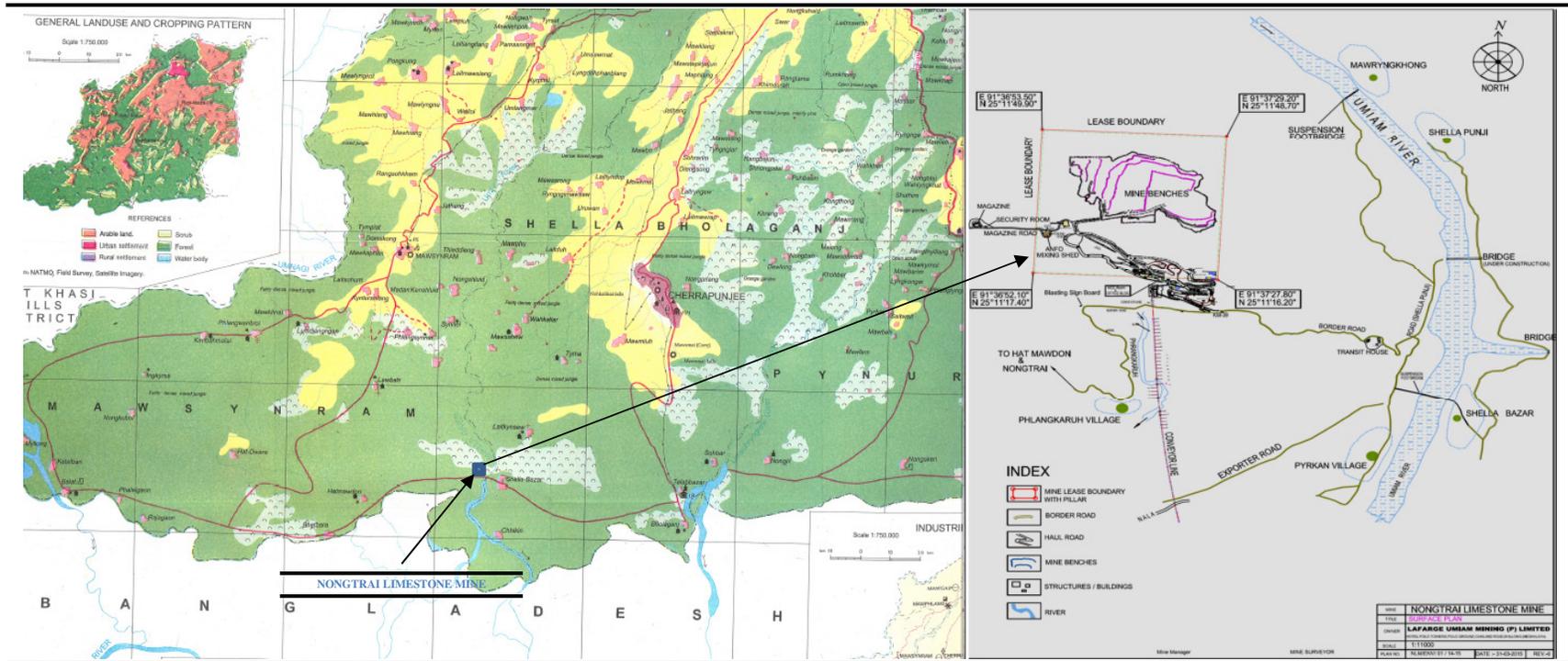
sahlang. Ka EMP ka la batai ia ki jingktah kiba mih na ka jingpynneh ia ka Projek bad ka la batai shai bad pynmih ia ki lad ki rukom pynduna kiba la donkam ban pyntreikam; khmang ba ka jingtreikam kan ia ryntih. Ki don ki rukom pyntreikam kiba kynthup hapoh ka Biodiversity and Wildlife Conservation Plan (ka jing pynneh pynsah ia ki jaid jingthung, ki mrad bad ka jingiada ia ki mrad khlaw) (kum shibynta jong ka Flora and Fauna Report jong ka NEHU,2015), Grounds Vibration Control Plan (Kaba peit ia ki rukom pynduna ia ka jingkhynnuh ka madan) (kum shibynta jong ka Blasting Study jong ka CIMFR,2015) Emergency Response Plan (kaba ai jingiarap lada jia kano kano ka jingjia kaba jia kynsan) bad ka Progressive Mine Closure Plan (na ka bynta ban khang noh ia ka par) la kynthup lang ha kane ka EMP (rukom pynneh bad khmih bniah ia ka mariang).

- 95) Kane ka monitoring plan ka kynthup ia ka jingpeit bniah ia ki daw ba napoh bad shabar kaba kynthup ia ka jingkhynnuh ka madan, ka jingjur jong ka lyer, ka rukom long jong ka lyer, ka rukom long jong ka jingsatwa, ka rukom long jong ka um bad ka um jaboh, ka rukom long jong ki mrad, ki briew bad ka jingiadei jong ki bad ka mariang bad ka rukom long ha ka imlang sahlng.
- 96) Ka EMP kan long ha ka kynja jingai jingtip kaba lah ban shu peit (Live document). Ka ba hap ban khmih bniah da ka kynhun ba treikam ha kane ka Projek ha kaba iadei bad ka jingpynneh ia ka Projek lyngba ka jingiasyllok lang bad ki tnat jong ka LUMPL kiba dei peit ia ka jinglong ka mariang, ka koit ka khiah bad ki jingiada bad kaba dei peit ia ka imlang sahlng. Yn pynlong ka jingkhmih bad ka jingai jingkhein kaba man la ka por na ka bynta ban lah ban pynneh pynsah ia ka jinglong jong ka mariang bad ha ki khup kiba donkam, ha ka por ba dang pyntreikam ia ka Projek, dei ban ai jingtip katkum ki jingdonkam sha ka EMP khmang ba kan lah ban peit ia ki khup kiba iadei bad ka mariang bad ka jingpynsah pynneh ia ka. Ka LUMPL ka dei ban don kti lang ha ka jingpyntreikam ia ka EMP ka ban kynthup lang ia ki Kontraktor bad ki nongai jingiarap jong ka. Ka LUMPL kan bah khlieh ia ka jingpyntreikam bha ia ka EMP.

O) Ka jingpynkut

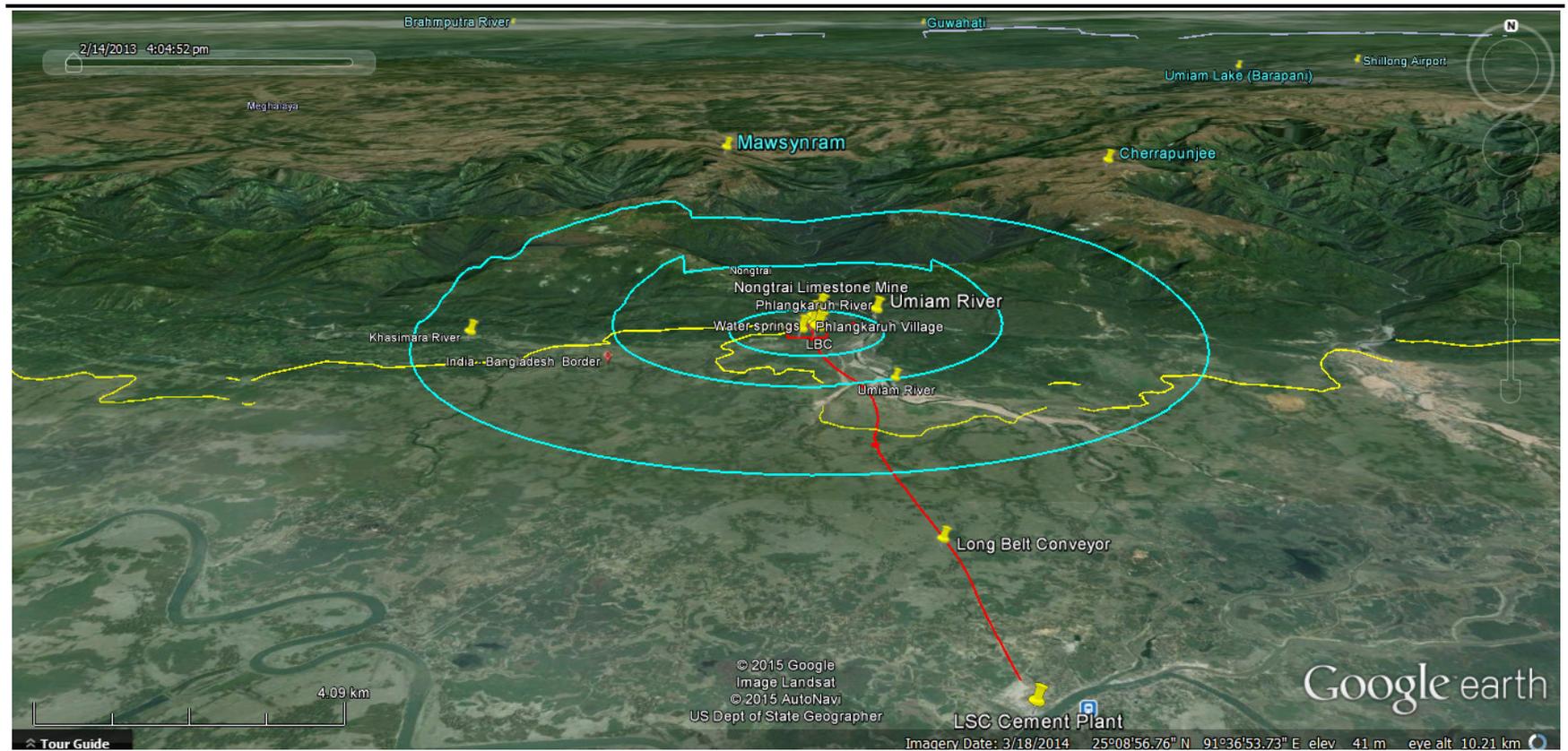
- 97) La khmih lynti ba ka jingpynneh ia kane ka Projek kan lah ban kot ia ka jingdonkam dewbilat ha Bangladesh. Yn pynneh ia kane ka Projek tang hapoh ka jaka kaba la shim wai lupa bad hapoh kiwei kiwei ki jingtei kiba la pyntreikam teng. Ka rukom tih ia u mawshun kan long katkum ka Scheme of Mining ba la ioh jingmynjur na ka IBM ha kaba ka jingjylliew jong ka jingtih kam dei ban palat ia ka 90 m RL. Ia ka jingkhein bniah shaphang ki jingktah ia ka mariang lah dep pynkhreh ha kaba la kdew ruh ia ki lad ki rukom ban pynduna ia ki jingktah ia ki jingdon jingem jong ka mariang bad ki briew, ki mrad kiba sah shajan. Ka jingkhein ia ki katto katne ki jingktah kiba donkam bha ki kynthup ia ka jingsam ia ki 100 tylli ki thliw hynriew sngi shitaiew hapoh 100 Ha jong ka jaka ba la shim wai ba don ka par, ka jingpynbthei, ka jingkit na ka surok kit mar, ka jingpynpra bad ka jingpyntuid ia ka mar lyngba u LBC lai sien shisngi lyngba 7200 kynta ka jingpyntreikam shi snem.
- 98) Ka Projek kan pynmih bun bha ki jingmyntoi ia ki paidbah lyngba ka jingshimwai man la u snem, ka jingsiew ia ka bhah bad ka khajna, ka jingsiew ia ka SPV na ka bynta ki kam bhalang, ka jingpynmih pisa na ka bynta ka sorkar jylla jong ka Meghalaya bad ka sorkar India lyngba ka jingia kylliang pisa shabar ri.
- 99) La pynmih ia ka Environmental and Monitoring Plan (kaba dei peit ia ka jinglong ka mariang) khnang ban pyntikna ia ka jingtreikam jong ka LUMPL ha kaba iadei bad ka jinglong jong ka mariang bad ka imlang sahlng na ka bynta ka jingpynneh jong ka Projek.
- 100) La buh jingmang jong ka jinglut kaba tang shisien (capital cost) ha ka 7.1 klur tyngka jong ka EMP katba ka jinglut ba man ka por (recurring) ka dei 2.1 klur tyngka na ka bynta ka jingpynneh ia ka jingtih mawshun ba 5.0 million tonne shi snem.
- 101) Ia ka jingpynsngew paidbah jong ka Projek yn pynlong da ka MSPCB katkum ka jingshem na ka jingwad bniah jong ka EIA. Hadien ka jingpynsngew paidbah, kane ka EIA report yn aiti noh sha ka MoEFCC na ka bynta ka jingiohmynjur jong ka Projek na ka bynta ka jingpynneh ia ka jingtih mawshun

Figure 0.1 Location Map of LUMPL's Limestone Mine



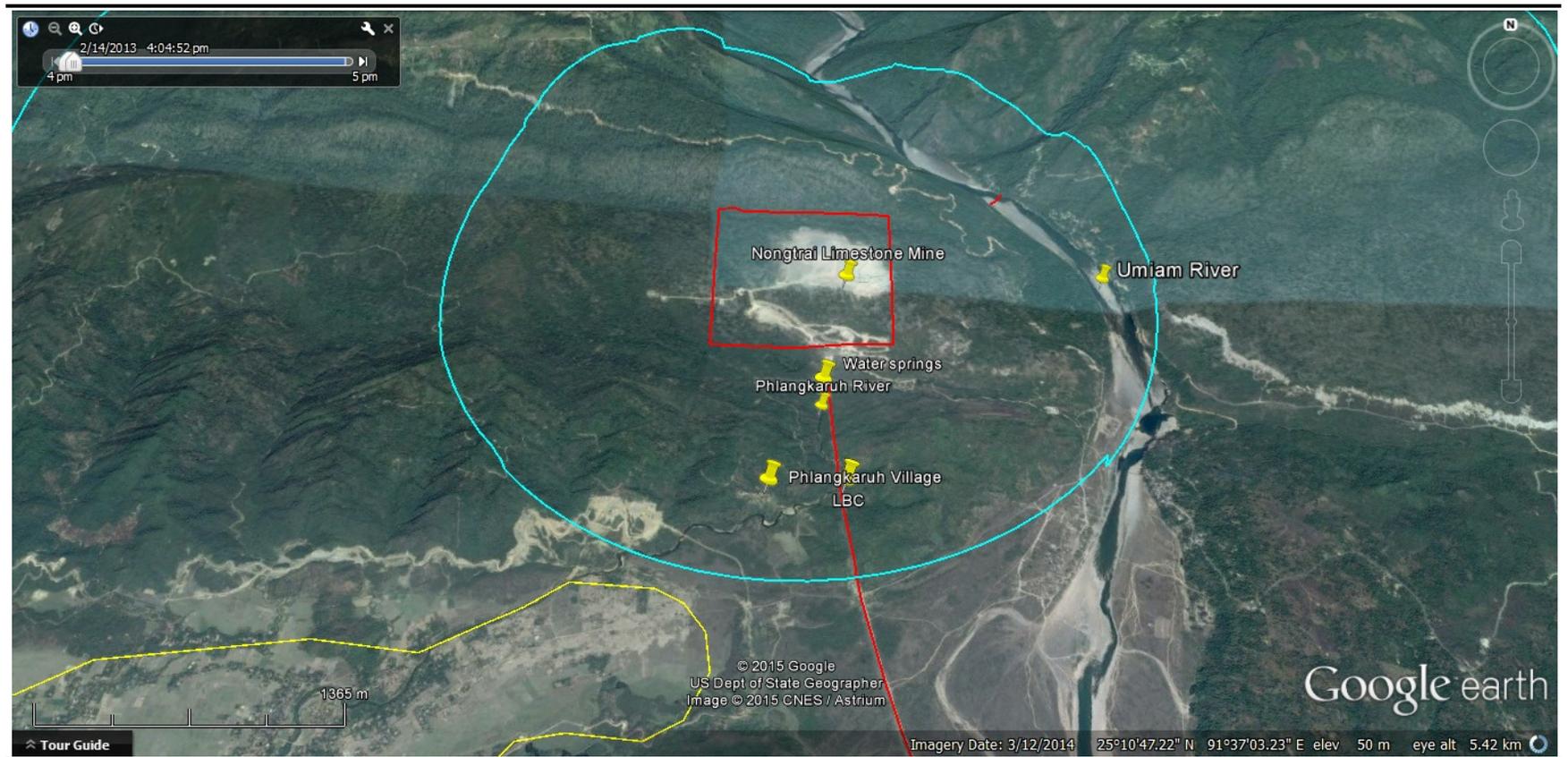
Source: Survey of India and LUMPL

Figure 0.2 Google Map showing Nongtra Limestone Mine and Surrounding Area of 10 km radius



Source: Google earth

Figure 0.3 Google Map showing Nongtraí Limestone Mine and Surrounding Area of 10 km radius



Source: Google earth

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