KA EXECUTIVE SUMMARY

M/S. INDIAN OIL CORPORATION LTD

(Ka Jingshna Ia Ka LPG Bottling Plant Kaba Thymmai)

Indane LPG Bottling Plant, Umiam, hajan ka nongbah Shillong, Ri-Bhoi District, Meghalaya

Jan' 2019

Bala Pynbiang da ka:

M/s. SV ENVIRO LABS & CONSULTANTS

Visakhapatnam

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Recognized by MoEF, and QCI Certificate no: NABET/EIA/1720/RA 0097

1.0 KI MAITPHANG

1.1 Ki Dienjat

Ka Indian Oil Corporation Limited (IOCL), ka dei ka Public Sector Undertaking (PSU)kaba iadei bad ka Ministry of Petroleum and Natural Gas, Sorkar India. Ka IOCL ka thmu ban shna thymmai ia ka 'LPG Bottling Plant'kaba don ka 'Bottling capacity'kum ba 30 TMTPA ha ka jyllaMeghalaya. Ka IOCL ka dei kawei na ki Kompany kiba paw kylleng satlak ka pyrthei bad ka dei ruh ka 'Fortune 'Global 500' listing'Kompany kaba na ri India. Ka long ruh ka Kompany kaba paw nam na ka bynta ki mar ba pynmih ha ka iadie ia thied ha ka ri India. Ban pynbiang ia ki markhyndewkum ka umphnaing 'petroleum' bad kiwei ki wei de, ka IOCL ka la shna ia ki 'Bottling Plants' kylleng ka ri India ha man ki jylla(states) ban pynbiang ia ki jingdonkam ki paidbah ha ka liang ki 'Domestic LPG Cylinders'.

Ka M/s. IOCL ka la thung ia ka SV Enviro Labs & Consultants, Visakhapatnam ban pynbit pynbiangia ki'EIA/RA Reports'naka bynta ka 'project' kaba thmu naka bynta ban ioh ia ka hukum bymmana lane ka 'Environmental Clearance'. Ka SV Enviro Labs & Consultants ka dei ka QCI-NABET ba pynkitda ka EIA, ka dei ruh ka nongpynshai (consultants) ha kane kajait kam kaba ia dei ba ki mar "Isolated storage & handling of Hazardous Chemicals".

1.2 Ka Bynta jong kaKaiphodEIA

La pynbit pynbiang ia kakaiphod jong ka EIA kat kum ka "Generic Structure of EIA/EMP/RA Report" ba donkam da ka MoEF&CC, Sorkar India,kat kum ka bynta kyllum jingpyntip ba la ai da ka EIA. Ki mat ba kongsan jong ka kaiphod ka dei na ka bynta ban tip bad wad bniah ha ka phnag jong ka mariang kum ki 'environmental'bad 'ecological stressors'.La pynbiang ia ka 'impact assessment' da kaba bud ia ki kyndon ban pyneh pynsah ia ka mariang kat kum ki 'environmental' bad ki 'ecological stressors'bad kiwei kiwei de ki kydon bad hukum ba la buh da ka sorkar bad kiwei die ki kynhun lane ki non-government agencies.

Ia kane ka jingthoh naka bynta ka phang 'Environmental Impact Assessment Documentation'la pynbit-pynbiang kat kum ki kyndon ba la buh da ka EIA notification jong ka MoEF&CC ba la pynmih ha ka tarik 14-9-2006, ia kaba la pynthymmaibiang ha

ka 1 tarik Nohprah 2009, 4 tarik Iaiong 2011kat kum ki kyndon ba la buhban ioh ia ka jing bymmana ha ka liang ka mariang lane ka 'Environmental Clearance'n aka bynta ka jingpyntreikam ka M/s Indian Oil Corporation Limited, ban tei ia ka LPG Bottling Plant ba thymmai kaba don ha ka jaka kaba ngi khot ka Umiam (V), Ri-Bhoi (D), Meghalaya, kaba hap hapoh ka category "B".

1.3 Ki Jingdonkam Ba Thmu (Project Proposal)

Ka IOCL, Meghalayaka thmu ban tei thymmai ia ka LPG plantna ka bynta ban thaw ia ki tyndong lyerbad ka kudam ban buh ia ka LPG kaba don ha Umiam (V), Ri-Bhoi (D), Meghalaya. La thmu ba ka storage capacity kan dei kumba3x150 MT LPG, bad ka bottling capacity kan dei kumba 30 TMTPA.

Yn pyntreikam ia ka LPG bottling plantda kaba pyntrei kam kumba ar sien ha ka shi sngila la ki jong ki pali lane ki 'shifts'bad kumba 300 sngi/ha ka shi-snem ban poi sha ka thong ban pynmih ia ki marshna(production) da kaba pyndonkam ia kine ki 'facilities'ba la batai bniah ha kane ka jingthoh.

1.4 Ka Jaka Na Ka Bynta Ka Project

La thmu ban pyntrikam ia ki jingdonkam jong ka project ha ka jaka kaba don ha Umiam (V), Ri-Bhoi (D), Meghalaya, India. Kane ka jaka ka iahap kumne harum:

Latitude : 25°40'52.60"N

Longitude : 91°54'33.51"E

2.0 KI MAT PYNTREIKAM BALYNGKOT (EXECUTIVE SUMMARY)

La pynbatai lyngkot ia kimat ban pyntreikamha kine ki lynnong kiba harum:

1. Shaphang Ka Project|Project Description
2. Shaphang Ka Mariang Bad Ki Sawdong Jong Ka Lem Bad Ki Jingiada Na Ki Kam Kiba Mynsaw |Description of Environment & Identification of Impacts and Mitigation Measures
3. Ki Mat Kiba Kongsan Bad KaJingioh-nong|Significance &Project Benefits
4. Ki Kam Kitkhlieh Shaphang Ka Mariang Bad Ki Sawdong Jong Ka |Environmental Management Plan

2.1 *Shaphang KaProject*

Ka Thong bad ki Jingthmu|Goal and Objectives:

Ka thong jong kane ka project ka dei ban wanlam ia kijingioh jingmyntoi sha ki nongkyndong lyngba ka IOCL ia ki jing sliew ding tyndon lyer (bottled LPG Cylinders)sha ka jylla Meghalaya ha ka dur kaba khuid kaba suba ka mariang ban lait naki jingmynsaw 'Safe & Environmental friendly'.Ki jingthmu ban ioh ia kane ka thong ka dei da kaba thaw bad pyndonkam ia ki 'Mounded Storage Vessels' lane ki klong kiba 3x150 MT, ka 'Bottling Capacity' kaba 30 TMTPA LPG Cylinders da kaba bud ia ki kyndon ain ha ka phnagMariang bad ki kyndon ban Husiar na ki jingma (Safety & Environmental Regulations) ba la buh kat kum ka ain ka kanun jong kane ka thain bad jylla.

Ki Jingpyndonkam ba la thmu| Proposed Facilities

Ki mat kiba donkam jong kane ka project ba la thmu ki dei ki 3x150 MT Mounded Storage Vessels, Bottling Capacity 30 TMTPA LPG Cylinders ha ka jaka kaba heh kumba 17.0 Acres ki dei kumne harum:

Table: 1 Proposed Infrastructure at M/s IOCL LPG Bottling Plant

Sr. No.	Description	Size, M^2
1.	Security Room at Gate – 0	12M x 5M
2.	Security Room at Gate – 1	6M x 5M
3.	Security Room at Gate – 2	6M x 5M
4.	Control Room cum S&D	25M x 8M
5.	Office building (2 storey)	10M x 10M
6.	PMCC	10M x 20M
7	DG Room	10M x 10M
8	Car Scooter Parking	5M x 20M
9	Canteen, Amenity & Contract Labour Change Room (2 storey)	10M x 8M
10	Store	24M x 10M
11	U/G Water Tank	10M x 8M
12	Fire Pump & Air Comp. House	25M x 10M

13	3 Nos. Fire Water Tank	11.25M x 16MØ
14	HSD	15M x 15M
15	Cylinder Deshaping Unit	5M x 5M
16	Cylinder Scrap Yard	15M x 10M
17	Scrap Yard	10M x 10M
18	Loading Overhang for Trucks	9M x 12M
19	Loading Shed	12M x 16M
20	Filled Cylinder Shed	10M x 25M
21	Connecting Platform	16M x 5M
22	Empty cum Filling Shed	90M x 25M
23	Unloading Shed	12M x 16M
24	Unloading Overhang for Trucks	9M x 12M
25	LPG Pump/Compressor House	30M x 8M
26	Cooling Tower	3M x 3M
27	Mounded Storage Vessel	3 x 150 MT
28	Tanker Lorry Decanting Unit (4 Bays)	24M x 15M
29	Drivers Rest Room	--
30	Bulk Truck Parking Area	--
31	Packed Truck Parking Area	--

- Yn buh ruh ha maki jaka jong kane ka project ba pyndonkam ia ka LPG ia ki ‘automatic sprinkler system’ban ker bad ban da na ka ding bad ka jingpluh iing, ya pynbiang ruh ia ki ‘hydrants’bad ki ‘monitors’ban ker na kine ki jingma baroh, kat kum ka jingdonkam jong ka OISD-144
- Yn pynbiang ruh ia ki ‘Hydrant network’ ba la batai hajrong sha ki jaka kudam lane ki jaka buh ia ki tyndong lyer / ‘storage vessels area’.
- Yn pynbiang ruh ia ki ‘Ring Main Hydrants’bad ki‘Fire Hydrants & Monitors’ha ki jaka ba donkam kat kum ba la batai ha ka OISD-144

2.2 Shaphang ka ‘Environment & Identification of Anticipated Impacts’

Shaphang ka 'baseline environmental status'kaba ia dei bad ka jingtlor jong ka mariang, ha kaba thaw bad tei ia ka project thymmai ba la thmu la batai bniah ha kine ki mat kiba ia dei bad ka meiramew kumne harum:

Ka Khyndew, Bad Ka Mariang Ker Sawdong:

La thmu ban thaw bad buh ia ki 'Mounded bullets'ha ka wie ka jaka kaba don kumba 17.0acres. Te kumta kan um don kano kano ka jingpynkylla ia ka jingpyndonkam ia ka khyndew sha wei pat.

Kin don ruh kato kane kimar jakhlia kiba ma, kiba ktah ruh ia ka khyndew kiban sa mih na ka project ba la thmu.Ia kine ki jait jakhlia lane ki 'hazardous material' yn phikir bad sumar ia ki kat kum ka stad saian 'siantifically' te kumta, ka khyndew kan um tlor than.Ka meiramew bad ka meimariang ruh kan um tlor bad kylla than namar ba; la thmu ban thaw bad shna ia ka 'facility' ha ka jaka kabym seisoh lane ha ka jaka kaba lyngki kaba don tang ki dieng-phyrngop.

Ban sngewthuh bad ban tip ia ka jait khyndew ka ba don ha kane ka jaka la shim 'sample' na kumba san tylli ki jaka swadong kiba don hala hala ki jong ki pud kane ka jaka. La pule bniah ruh ia ki jingdon jinem jong kane ka khyndew.

Kat kum ka stad sian ka 'pH' jong ka khyndew ka long kaba kongsan tam. Namar ba; ki jingthung-jingtep kim lah ban mih lada ka 'pH' jong ka khyndew kam biang bad ka kiew lane ka hiar palat. Ka 'pH' jong ka khyndew kadei ban don ha ka number kaba6.0 haduh 8.5. Ha ka jingpeit bniah lyngba ka stad sian la lap ba ka 'pH' jong ka jaka khyndew ka long kumba 6.89 haduh 7.62, kane ka pyni ba ka khyndew jong kane ka long 'neutral' bad 'alkaline' khyndiat.

Ka lyer, Bad Ka Mariang Ker Sawdong:

<u>Ka jingkhuid jingsuba jong ka lyer kaba mynta |Existing Ambient Air Quality</u>

Ia ka jingkhuid bad ka jingsuba ka lyer pat la pule bniah ia ka jingdon jingem jong ka lyer jong kane ka jaka kumne harum :

- La shim 'sample' ia ka lyer ban tip bniah ia ka jingkhuid jingsuba 'Ambient air quality monitoring' na shiphew liang ka jaka sawdong kaba don ha kane ka jaka.

- La shim bad peit bniah ruh ia ka ‘Meteorological data’ha ka juh ka por.

La peit bniah ruh kumba lai bnai naduh u bnai Kyllalyngkot, 2018 haduh u bnaiLber, 2018 ban sngewthuh ia ka jingkhuid- jingsuba jong ka lyer ha kane ka jaka jong ka ‘project’bad ha kito ki jaka kiba mar jan bad ki iing-sah briew bad ka jaka nongkyndong ha kane ka por. Ha kane ka por ba la peit bniah la lap bad thew ia ki bun jait ki jing jakhliah kiba don ha ka lyer suin-bneng kum ki PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, HCbad VOC .

Ki mat kiba kongsan jong kane ka kaiphod ka long kumne harum:

Summary of Analysis of Ambient Air Quality in the Study Area

Parameter	PM10(µg/m^3)					PM2.5(µg/m^3)				
Monitoring Station	No.of samples	Maximum	Minimum	Mean	98th percentile	No.of samples	Maximum	Minimum	Mean	98th percentile
A1	26	63.4	48.3	56.7	63.0	26	35.6	23.9	29.4	35.0
A2	26	59.0	43.9	52.3	58.6	26	31.6	19.9	25.4	31.0
A3	26	62.3	47.2	55.6	61.9	26	34.5	22.8	28.3	33.9
A4	26	57.9	42.8	51.2	57.5	26	30.7	19.0	24.5	30.1
A5	26	60.1	45.0	53.4	59.7	26	32.5	20.8	26.3	31.9
A6	26	56.8	41.7	50.1	56.4	26	29.8	18.1	23.6	29.2
A7	26	61.2	46.1	54.5	60.8	26	33.4	21.7	27.2	32.8
A8	26	64.5	49.4	57.8	64.1	26	36.7	25.0	30.5	36.1
NAAQS	100(µg/m^3)					60(µg/m^3)				

Parameter	SO2(µg/m^3)					NOx(µg/m^3)					CO(mg/m^3)				
Monitoring Station	No. of samples	Maximum	No. of samples	Maximum	Minimum	Mean	98th percentile	Minimum	Mean	98th percentile	No. of samples	Maximum	Minimum	Mean	98th percentile
A1	26	17.7	26	19.8	13.5	15.7	18.95	11.3	13.6	16.8	26	0.23	0.15	0.18	0.23
A2	26	15.7	26	15.5	9.1	11.4	14.6	9.3	11.6	14.7	26	0.14	0.11	0.12	0.14
A3	26	17.1	26	19.2	12.9	15.1	18.4	10.7	13.0	18.4	26	0.19	0.11	0.15	0.18
A4	26	15.3	26	14.9	8.5	10.8	13.9	8.9	11.2	14.4	26	0.13	0.11	0.11	0.13
A5	26	18.0	26	18.0	11.7	13.9	17.2	11.7	13.9	17.2	26	0.15	0.11	0.13	0.15
A6	26	14.9	26	14.3	7.9	10.2	13.4	8.5	10.8	13.9	26	0.12	0.11	0.11	0.12
A7	26	16.5	26	18.6	12.3	14.5	17.8	10.1	12.4	15.5	26	0.17	0.11	0.13	0.16
A8	26	18.3	26	20.4	14.1	16.3	19.6	11.9	14.2	17.4	26	0.25	0.17	0.20	0.24
NAAQS	80(µg/m^3)					80(µg/m^3)					4.0(mg/m^3) at 1 hr Monitoring				

Na kine ki kaiphod ba la mih lane ki 'monitoring results', ngi la lah ban rai ba ki jing don ki jing jakhliah ha suin bneng lane ha ka lyer ka long kaba biang kat kum ka jingsngewthuh hapoh ki kyndon ba la buh da ka NAAQS na ka bynta ki jaka ba dei ki industrial area', ki nongkyndong bad ki jaka sah iing briew.

Ka Thymmei Jong Ka lyer Jaboh:

Ka jing-pyndonkam ia ka 'bottling plant'ka dei tang na ka bynta ban buh bad pyndonkam ia ki klong lyer LPG. Kane ka jait kam, kam da wanrah than ia ka jingjaboh bad jingjakhlia sha ka lyer lane sha suinbneng. La pyntriekam ia ka jingioh, jingbuh ha kudam ia kine ki klong lyer lane ki 'cylinders' ha ka jaka kaba la sumar bha kaba don da ka 'closed circuit and leak proof system' khnang ban teh lakam ia ki jingmih jakhlia kum ki 'hydrocarbon vapours'sha suinbneng.

Tangba, ki don hi kato-katne ki lyer jakhlia kiba mih na ki 'DG Sets'bad ki 'fire Water pumps'kiba ju pyndonkam ha ka por ba lip bor-ding, kata ruh tang ha ka por ba iatrei kam.Kumjuh ruh ha ka por ba pynhikai ban pynlip ding, ka jing-ai-hikaikaba ju pynbeit shisien ha ka shi bnai ban maham ha ka por ba don kano kano ka jingpluh kaba shyrkhei. Te kumta, kan um da don than ka jing jakhlia ha ka lyer haka ba shna bad buh ia ki'Mounded Bullets'.

Ka Jingsawa Bad Ka Mariang Sawdong

Ia ka jingsawa pat la thew ia ka, da kaba shim nuksa na phra tylli ki jaka sawdong jong ka 'project plant site'. Ngi la thew bad ngi la lap b aka jingsawa ka long kumba 52.4haduh54.9 LeqdB(A) ha ka por mynsngi bad 41.9haduh 44.2 Leq dB(A) ha ka por mynmiet.

Te kumta la rai baka jingsawa ha kane ka jaka ka long kat kum ki kyndon ba la buh da ka CPCB.

Ka Um bad ka Mariang Sawdong

Ban wad jingtip na ka bynta ka jingkhud-jingsuba jong ka um pat, la shim nuksa na 8 tylli ki jaka ba don um hapoh ka kyndew bad 2 tylli ki jaka ba syrtap ka um halor khyndew kylleng ka jaka jong kane ka 'project'kat kum ki kyndon kiba biang.

Ka Kaiphod jong ka Um Kaba Syrtap halor khyndew (Surface water)

- Ka ‘pH’ jong kaum kaba syrtap halor khyndew ka long‘neutral’bad ka ‘pH’ka long kumba 7.1 haduh 7.3
- TDS ka long kumba 47 mg/l haduh 59 mg/l. Ka‘tolerance limit’pat ka longkumba 1,500 mg/l kat kum ka IS:2296
- ‘Hardness’jong ka um ka long kumba 29 mg/l haduh 34mg/l
- Ka ‘Nitrate’pat ka don kumba <0.1 ha baroh ar tylli ki jaka ba la batai hangne.
- ‘DO’ka long kumba 6.6 mg/l haduh 6.7 mg/l
- Ka ‘coliform’ ha um pat ka don kumba 66 MPN/100ml haduh 74 MPN/100ml.Kane ka lah ban long namar ba ki lah ban don ki khnain jingpang‘bacteriological contamination’ namar ba ki don ki jaka sah iing briew ha jan.
- Ki ‘heavy metals’ pat ki duna bad kim da bun than.

Ka Jingkhud-Jingsuba jong ka Syrtap Um Kaba Shatrai:

La shim nuksa ba ka ‘pH’ jong ka um dih ka dei ban don kat kum ka IS: 10500 kata ka dei ban long 6.5 haduh 8.5. Ha ka por ba ia peit bad pule bniah la lap ba ka ‘pH’jong ka um kaba shatrai khyndew ka long kumba 6.7 haduh 7.0.

Ki ‘dissolved solids’kat kum ka IS: 10500 ki dei ban don tang kumba 500 milligrams per liter (mg/l). Na ki nuksa lane ki ‘sample’jong ka um ba la shim na shatrai khyndew la lap ba ki ‘total dissolved solids (TDS)’ ki don kumba 18.3mg/l haduh 24.9mg/l. Ka TDS naka bynta baroh ki samples lane ki nuksa ba la shim naka bynta ka jing pule peit bniah ki lap ba ka long kumba 2000 mg/l hapoh ka ‘permissible limit’lane ka jing ai lad.

Ka ‘Chloride’pat ka dei ban don hapoh ka 250 mg/l kat kum ka IS:10500. Ha kane ka jaka ngi la lap ba ka ‘Chloride’hapoh ka um kaba shatrai ka don kumba 4.2 haduh 6.4 mg/l.

Kat kum ka IS: 10500 ka um ka dei ban don ka 'hardness'kaba 300 mg/l bad ka jing ai lad ia ka, ka dei kumba 600 mg/l. I aka um kaba shatrai pat kaba don ha kane ka jaka la lap ba ka 'hardness'ka long kumba 7.0mg/l haduh 9.1mg/l.

Ka 'Fluoride'pat ka dei ban don kumba 1 mg/l bad ban ai lad pat ka dei tang kumba 1.5 mg/l. La lap pat ba ka um kaba shatrai jong kane ka jaka ka long kumba 0.27mg/l haduh 0.36mg/l.

Ki 'heavy metals'ha ka um ba la song na ka bynta ka jing pule peit bniah pat ki long hapong ka permissible limits.
I ka'Coliform'pat la lap b aka don kumba 6 haduh 15 MPN/100ml.

Ha kaba peit ia kine ki jing pule bniah kiba thoh halor, la lah ban rai ba baroh ki kaiphod kim tam na ka 'permissible limits of IS: 10500 Drinking Water Standards'.

Ka Jingpyndonkam ia ka Um

Ka jingthmu jong ka 'project' ka dei tang ban shna ia ki Mounded storage vessels kiba long kumba 3 x 150MT. Ka jingpyndonkam ia ka um ka dei tang na ka bynta ban tei ia ka 'project' ka ban pyndonkam kumba 5.0 KLD 'domestic purpose' bad 5 KLD 'cylinder washings.'

Jingpynmih ia ka um Jakhlia

Ka jingpynmih ia ka um jakhlia n aka plant man la ka por 'normal operation' kan long kumba 8.0 KLD. Ka um jakhlia kaba ki khot ka 'Sanitary wastewater'yn bret ia kine sha ka STP.Ia ki jakhlia kaba ki khot ka 'non-sanitary waste water' (due to mock drill, once in a month) pat yn pyndonkam biang ia ka n aka bynta ka 'green belt development'.

Ki Jingim-Jingmih bad ka Mariang Sawdong jong ka

Ka jingthmu ka long ban shna bad ban thaw ia ki 'ficilities'ha ka jaka kabym seisoh kaba don marjan bad ka 'bottling plant'. Ka jingtlor jong kane ka long kaba duna namar ba kam da ktah than ia ka 'biological environment' kat kum ka jingpyntrei kam jong kane

ka project. Kumjuh ruh, ka la don ka jaka kaba heh bad; la thmu ban thaw ia ka 'green belt'. Kane kan long ka jaka shong pyngad bad ka jaka sah jong ki sim bad ki mrad kiba rit. Te kumta, kine ki sim bad ki mrad ki lah ban ioh ia ka bam ka dih na ki jingim-jingmih ki jingthung kiba pher bap her.

Ka Rukom Im Paidbah ha ka ioh ka kot

Kane ka project kan wanrah bun ki jingmyntoi kaba shipor na ka bynta ki paidbah kiba sah sha kane ka thain. Ka jing thaw jong ki 'Mounded storage vessels'kan wanrah ruh ia ka kam kaba shipor bad kan wanrah ruh ia ka jingioh nong kaba bun ia ki briew jong kane ka jaka.

2.3 Kiwei pat ki Jingpyntreikam| Analysis of Alternative (Technology & Site)

Ka IOCL ka ka long ka Kompany kaba don sap ha ka bynta ki kor-pyntreikam ban shna bad thaw ia ki 'Mounded Storage Vessels". Ka LPG department kaba kynthup hapoh ka kam iadie-iathied jong ka IOCLka long kaba paw bha ha ka liang ban shna ia ki 'Mounded Storage Vessels.'Ki kor pyntreikam ban thaw ia ki "mounded Storage Vessel" jong ka IOCL ka long kaba ba shngain lane ka dei ka 'fail-safe technology'. Namarba ka MSVba la thmu ban shna ka dei hapoh ki pud sawdong jong ka 'Plant site' te kumta kan um don kam ban buh pat sa kawei ka jaka kylliang ban thaw ia kine.

2.4 Ka Rukom Pyniad Ia Ka Bynta Ka Mariang Ker Sawdong| Environmental Monitoring Programme

La buh ruh ia ka 'monitoring schedule' ba kynthup ia ki bynta ban peit bad sumar bniah ia ka mariang ker sawdong kum ka Ambient Air Quality, Waste Water Quality, Noise Quality CPCB/State PCB.

2.5 Ki Jing-Pule Bniah Kiba Pher| Additional Studies

La kynthup ruh ia ki jing-pule bniah lane ki 'additional studies'ba kynthup ia ka ' risk analysis', DMP bad HAZOPba donkam 12 aka bynta ka project. Ki mat ba kongsan ki long kumne harum:

Ka jing pyniadei bad ki Surok-Ki Syngkien| Impact on local infrastructure such as road network etc

Kin sa don ruh bun ki jing ia shalan lyngba ka surok ka syngkien kaba iadei bad k aka jing iashalan mar bad ka jing ia rah ia ki briew na kawei sha kawei pat ka jaka.La thmu ban pynbiang ia ki surok ki syngkien sha kito ki jaka trei lane ka 'project site'.

Ka Jingsiew na ka bynta ki briew kiba la shah ktah naka bynta kane ka Project ba la thmu | Compensation package for the people affected by the proposed project:

La thmu ban tei 03 tylli ki'Mounded Storage Vessels'n aka bynta ban buh kudam ia ki mar lane 'bulk LPG'ha Umiam (V), Ri-Bhoi (D), Meghalaya.

Ka Umiam ka long ka shnong kaba iajan tam na ka project site. Ki briew kiba sah ha katei ka jaka ki long ki briew kiba trei kam kum ki 'industrial workers'.La thmu ba ka 'facility' kan um kta than ia ki briew kiba bun na kato ka jaka lane ban beh dyngkhong ia ki.

Te kumta kane ka 'project'ba la thmu kan um donkam ban 'Resettle'lane ban wad ia ki jaka kynriah ba thymmai ba ban 'Rehabilitate'lane ban pynshong- tngen sha kawei pat ka jaka kat kum ki kyndon ba la buh ha ka 'RR Policy'.

Ka Jngthmu banker bad ban da ia ka Im-lang ka Sanh-lang bad ka Jing-ioh jing-sep jong ki briew kiba sah ha kane ka shnong| Proposed plan to handle the socio-economic influence on local community:

Na ka bynta ban shna ia ki 3 tylli ki 'mounded storage vessels' ka don ka jing donkam ia ki nongtrei kumba 100ngut ban tei ia kane ka 'facility'.Ki nong bylla sngi 'unskilled-jobs'kin long ki briew kiba sah lane kito kiba sah mar jan bad kane ka 'project site'. Kane kan wanrah ia ka jing-ioh jing-kot ia ki briew jong kane ka thain. Ia kito ki kam kiba kham donkam sap ha kane ka liang lane ki 'skilled jobs'pat yn pyntrei kam tang kato kane ngut ki briew kiba na kane ka jaka lada don. Na kabynta kito ki briew pat kiba sah ha ka pyllun radius kaba hap ha ka 5 Km kan um donkam ia ka 'assess the impact'jong kito ki briew lane ki 'marginal number of workers'kiba wan nabar jylla.

2.6 Ka 'Risk Analysis'

Ka 'Risk Assessment'na ka bynta kane ka 'project'ba la thmuka long ban da bad ker na kino kino ki jingma ba la batai bniah ha ka lynnong kaba-7. La thmu ban thaw bad thung ia ki 'Mounded Storage Vessels'kiba 3 x 150 MT ban kern a kino kino ki jingma.Ka jingthung lane ka jingthaw ia kine ki 'Mounded Storage Vessels'kan um pynwit ia kaba ki khot ka 'risk profile'jong kane ka 'plant site'.

2.7 Ki Mat Kiba Kongsan bad ki Jingiohnong na ka Project

La thmu ban thaw bad shna ia ki 3x150 MT 'Mounded Storage Vessels' kiba don ka 'Bottling Capacity'kaba30 TMTPA LPG Cylinders ha ka jaka kaba heh kumba 17 Acres ei ei.

Ka jingthmu kaba kongsan jong kane ka 'project' ha ka jylla Meghalaya ka dei ban pynbit-pynbiang ia ki jingdonkam jong ki nong-die bad nong-thied lane ki 'consumer' bad ban pynduna ia ki kam shalan sha ki jaka kiba jngai ha ka wei pat ka por kaban sa wan.

Ka Indian Oil Corporation Ltd. (IOCL) ka thmu ban shna ia ka 'LPG FILLING CUM BOTTLING PLANT' haMeghalaya. Kane kan long ka 'Bottling Plant'kaba 30 TMTPA capacity ban pynbit pynbiang kat kum ki jingdonkam naka bynta ki 'packed LPG cylinders'ha u snem lane'financial year' 2020-21. Lada sdang noh ia ka jingtei jong kane ka 'Plant' mynta , kan pynlongban ngin ioh ban pyndep dep noh iakane ka jingtei ia ka thie ka 'Plant'ha u snem 2019-20 bad kin sa lah ruh ban 'stabilize'ia ka Bottling ha ki snem kiban sa wan kata ha u snem 2020-21.

Ki Jingiohnong lane ka Jingiohmynoi Na Ka Project:

- Ka jingioh pyndonkam ia ka 'Energy'lane ka ding kaba khuid ha ki iing shimet
- Ka jingpynioh kamai bad ki kam kiba pher ba pheria ki briew jong kane ka thain
- Ka jingpynkyntiew ia ka ioh ka kot jong kane ka thain

2.8 Environmental Management Plan

Ka Environmental Management Plan (EMP) kadei ka kam ban pyntreikam bad ban weng ia ki jingthut ba mih na ki jakhlia ba pynthut ia ka mei mariang ha kane ka 'project'ba la thmu ban shna. Ka EMP ka buh nuksa bad ki kyndon rukom ban shna lane ka 'planning phase', ka rukom shna lane ka 'construction phase'bad ka rukom pyntreikam lane ka'operational phase'hakane ka plant.

Ka jingthaw lane ka jingshnaia ki 'Mounded Storage Vessels'na ka bynta ban buh kudam lane 'storage'jong ka LPG yn pynwandur kat kum ka ain ka kanun ba la buh da ki kyndon lane ki 'directives of Environmental Clearance documents'.

Ka jing pynteh lakam ia ki jingpynjakhlia lane ki 'Environmental pollution' ha ka por ba shna ia kane ka plant ka dei tang shi por hynrei ka long ka ei ka ei kaba kongsan. La pynwandur ruh ia ki jingdonkam ban sumar ia ka meiramew lyngba ki 'mitigation measures'.

Te kumta kini harum ki long ki mat ba kongsan ha kaban pyntreikam ia ka Environmental Management Plan ha kane ka 'Plant site':

- Ka jingpyntreikam ia ki process kiba pher ba pher kat kum ki kyndon ba la buh da ka 'OISD guideline's.
- Ban bud ruh ia ki kyndon ban sumar ia ki kor-shna kiba pher ba pher
- Good housekeeping practices
- Ka jingpynbeit ia ki kam kiban iada ia ka mariang ha kaba la kut ka project ruh kumjuh.