

**COMMON BIO-MEDICAL WASTE TREATMENT FACILITIES (CBMWTF),  
TUIRIALA DIN TUR CHUNGCHANGA PUBLIC HEARING REPORT KIMCHANG**

Sawi hawna :

Ministry of Environment, Forest & Climate Change, Govt. of India-in lehkha No S.O. No. 1142(E) Ni 17.04.2016 hmangin “Damdawi in bawlhhlawh sawngbawlina hmun (Bio- Medical Waste Management Facilities) zawng zawngin damdawiin bawlhhlawh sawngbawlina hmun a din hmain Environmental Clearance an mamawh ang’ tiin thu chhuah a siam a. Hetiang damdawiin bawlhhlawh sawngbawlina hmun te hi Category B1 projects niin, Mizoram SEIAA/ SEAC hnuai a dilna siam tur a ni.

Mizoram ah damdawiin bawlhhlawh sawngbawlina intawm (Common Bio- Medical Wastes Treatment Facilities) chu danin a phut angin din tum a ni a. Chuvangin, he damdawiin bawlhhlawh sawngbawlina intawm (CBMWTF) hian Air (Prevention & Control of Pollution) Act, 1981 leh Water (Prevention & Control of Pollution) Act, 1974 hnuai ah Pollution Control Board atanga phalna neih hmain Environmental Clearance neih a ngai a ni.

Ni 30.09.2021 (Ningani) dar 11: 00 AM khan CBMWTF din tur chungchanga Vantlang inkhawm (Public Hearing) chu Irrigation & Water Resources Department, Video conference room-ah online-in neih a ni a. He inkhawm hi Dr. Lalhriatuali Ralte, IAS, Deputy Commissioner, Aizawl chuan a kaihuai a. A ni hian vantlang inkhawma official telte chu in hmelhriat tirna nei in programme hman dan tur tlangpui te a sawi a. Mizoramah sawrkar hospital te, private hospital te, clinic te awm belh zelin, heng ho atanga bawlhhlawh chhuak entir nan thisen kai emaw, zun leh ek a ni emaw, mihring taksa them leh a dangte paihna leh tih riral na kan State hian kan la nei lo va. Amaherawhchu, UD&PA hnuai ah hma lakna a han awm a, Aizawl Smart city project hnuai ah ruahmanna a han awm chho a, he thil hi kan state hian kan chhawr tangkai dawn a ni. Tunah hian Mizoram pumah damlo khum 3295 vel a awm a, chu chu damlo khum pakhatin ni khatah bawlhhlawh (Bio-medical waste) kan tih hi 350g nei ang an ni. Chuvang chuan heng bawlhhlawhte hi tihthianghlim a lo nih a, hman nawn theih te hman nawn a lo nih a, mihring tana natna hlauhawm inkai chhawn theih te chhut chah a lo nih theih nan he CBMWTF hi thil pawimawh tak ani a. He facility hi Turiala din tum a ni a, ENPRO, Envirotech hian nikum lam a tang tawh khan a chhehvel a ramngaw te, leilung te, nungcha te, thlai te, hnim awm dan te an lo zir Chiang vek tawh a, chu chu sawifiah na (presentation) an nei dawn a ni. Tuna hearing kan neih chhan project hi kan pawm emaw pawm dawn lo emaw tihna a la ni lo va, amaherawh chu draft Environment Impact Assessment report hi he hearing atang a siamthat tur a niin chu report chu a lo thlir tu tur, environmental Clearance pe thei tu tur MoEF&CC emaw SEIAA/ SEAC chuan an lo zirchiang leh dawn a ni. Chuvang chuan tuna kan hearing neih te kan zawhna te, kan rawtna neih te hi a pawimawh em em ani.

Chairman-in Pu C. Lalduhawma, Member Secretary , Mizoram Pollution Control Board chu thu tawi sawi turin a sawm a, a ni chuan tiang hian a sawi a, “ Pollution Control Board chuan sawi tur thui tak kan nei lo va, amaherawh chu dan in a phut angin hriattirna thla khat kal ta ah khan kan chhuah a, chutah chuan mi in sawi duh an neih te, tawngka pawhin ziak pawh in a lo thlen lawk theih kan ti a, amaherawh chu office lamah chutiang chu engmah kan dawng lem lo niin a lang a, engpawh ni sela vawiina public hearing kan neih chhan hi Sawrkar laipui a fimkhur a, developmental project a awmin mipui te leh environment in a tuar tur a ni lo tih hi a thupui a ni a. Chumi avang chuan hmansawna a lo awm a, tunah pawh damdawiin bawlhhlawh-private hospital leh damdawiin hrang hrang in anmahni damdawiin bawlhhlawh hi engtin nge an thehthang tih hriat hleih theih mang lo a awm kha, tunah chuan he project avang hian hmun pakhata la khawmin, a sawngbawl dan thianghlim tak, environment leh mihring a nghawng loh dan kawng kha kan zawng dawn a, he hi danin neih ngei ngei tura a phut, kan neih loh vanga Pollution Control Board pawn enforcement lamah harsatna kan tawh mek a ni a. Pollution Board lam tan chuan he thil hi thil lawmawm tak a ni a, chutihruual chuan, a awmna tur hmun a zirin damdawiin bawlhhlawh hi tenawm mahse thianghlim takin a sawngbawl theih a ni. Vawiinah hian, a pawimawh ber chu mipui te kan ni a, mipui aw ngaithla tura lo kal kan ni a, vawiina mipui ngaidan te leh mipui aw hmang hian he project nei tu te hian Final Environmental Impact Assessment an siam dawn a ni. Chu chu State Sawrkar ah an thehlut ang a, authority-in an lo en ang a, an ni chuan Environmental Clearance pek tlak ani e an tih chuan an pe tawh mai dawn a ni. Chu chu vawiina kan thil tih kalphung a ni a. Tin, Environmental Clearance an neih hnu pawh hian Mizoram Pollution Control Board atangin phalna a la ngai leh dawn a, chungte chu kan la en fel tur a ni a, he thil hi kan ram tana thil tha tak tur beisei awm tak a ni a, engtin nge tha leh zual in kan kalpui theih ang tih hi vawiina Public Hearing in a tum chu a ni.”

Chairman: Dr Lalhriatzuali Ralte, DC, Aizawl:

“Bio medical wastes enkawlna tur dan hi Sawrkar hian 2016 khan a lo siam daih tawh a. March kha hman tan a ni. Nichina ka sawi thuak tawh ang khan Bio medical wastes chuan hospital te, clinic te, dispensary hrang hrangte, verinary institution te, ran talhna hmun te, blood banks, nursing homes, vaccination leh blood donation camp te, forensic laboratory te pawh a huam vek a ni. Chutah chuan damdawiin leh wastes siamtu (generate) tuten mihring leh environment ti bawrhbang lo tura bawlhhlawh sawngbawl turin mawhphurhna sang tak an nei a. Danin a sawi anga a khawlna bur rawng bik theuh a thliar fel te, room him leh thengthaw taka dah that ( storage) te, WHO leh NAACO -in an kaihraina anga laboratory wastes, microbiological wastes, blood samples leh blood bags te te a hmuna tih disinfection emaw sterilisation emaw hmanga han sawng bawl te, nitin bawllhlawh chhuak leh tih thianghlim dan ziaka chhinchhiah te, thla tin leh kum tin a an bawllhlawh zat te, sawngbawl leh a paihna hmun te reportsiam leh an website a tarlan te an mawhphurhna a ni a. Kan zawm kim vekin tih chu ka hre lo a, Pollution Control Board lamin record chiang zawk te an la pe thei tuirah te pawh ngai ila a tha ang e.”

Chief Executive Officer, ASCL leh Project Director, SIPMIU ni bawk Pu Er Lalrothanga chu project chungchang min hrilfiah turin a sawm a.

Er. Lalrothanga chuan an mithiam rawih chu project chungchang power point presentation nei tura a sawm angin ENPRO Enviro Tech & Engineers Pvt Ltd atangin Pu Rushabh Mevawala chuan sap tawngin a hnuai ziah lan ang hian a hrilfiah a.

### **1. INTRODUCTION AND BACKGROUND OF THE PROJECT:**

Bio- Medical wastes are wastes generated from diagnosis, treatment, analysis or immunization of people / animal at large. They are required to be treated, disposed as per the Bio-medical Waste Management Rules, 2016.

At present, in the state, there are around 116 nos of health care facilities and 3295 beds generating bio-medical waste of 1153 kg/day. In Aizawl city 2191 nos of bedded hospitals generate 767 kg per day.

### **2. NEED FOR PROJECT FACILITY:**

The CBMWTF will offer an advantage to all small health care facilities through efficient treatment and disposal of bio-medical waste. Absence of CBMWTF in the state, rising awareness and need for centralized treatment facility in Aizawl has prompted proposal for establishment of the CBMWTF.

The CBMWTF will consist of the equipments such as incinerators, autoclave, shredder and ETP facilities. It is to be established beside the existing Solid Waste Resource Management Centre bearing LSC No.10301/ PP No. 77 of 2005 and 5000m<sup>2</sup> areas has been allocated.

### **3. SALIENT FEATURES OF THE PROPOSED PROJECT:**

- Mean sea level- 318m
- Annual mean rainfall- 2216mm
- Temperature : Maximum : 24.6°C and Minimum : 15.5°C
- Nearest highway- NH 306 which is 690m from the project site
- Nearest village- Tuirial which is at 2.6 km radius
- Nearest water body- Tuirial river which is 740m from the project site
- Nearest airport- Lengpui airport 21 kms from the site
- Nearest railway station- 56.3 km from site
- Nearest forest reserve- Tuirial Reserve Forest in buffer zone
- Seismicity- Zone V
- No state or national boundary within study area.

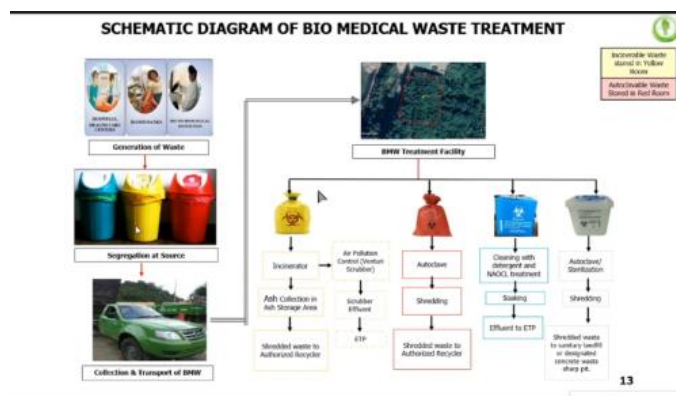
Out of the total cost of Rs 10.28 crores, total cost allocated for “Corporate Environment Responsibility is Rs. 20.76 lakhs. As per CPCB guidelines, 33% is allocated for the plant layout. The layouts have dedicated area for incinerator, shredder, sterilization room and hazardous waste storage area. A free movement of vehicle is considered in the plan with a dedicated area for Weigh Bridge.

#### 4. HAZARDOUS WASTE GENERATION AND ITS MANAGEMENT:

Type of waste	Source	Quantity generated (kg/day)	Method of disposal
Incineration ash	Incinerator	250	Sent to TSDF for secured landfilling
ETP sludge	ETP	50	Sent to TSDF for secured landfilling
Plastic waste after autoclave and shredding	Shredder	100	Sent to authorized recycler
Glass and metallic body implant	Autoclave	50	Sent to authorized recycler
Metal sharps after autoclave and shredding	Shredder	As generated	Sent to foundry for metal recovery/ TSDF site
Waste oil	Plant and machineries	10	Sent to authorized recycler
Used batteries	-	As generated	Sent to authorized recycler
Sewage sludge	Packaged STP	2.7	Manure in gardening

#### 5. SCHEMATIC DIAGRAM OF BIO-MEDICAL WASTE TREATMENT:

Segregation of wastes at source was elaborated with a schematic representation of the bio-medical wastes treatment. Wastes will be treated and disposed accordingly and that Color coding will be practiced for segregation and each category of wastes will be stored in designated storage area.



#### 6. PROCESS DESCRIPTION AND TECHNICAL SPECIFICATION OF EQUIPMENTS:

The following equipments are proposed

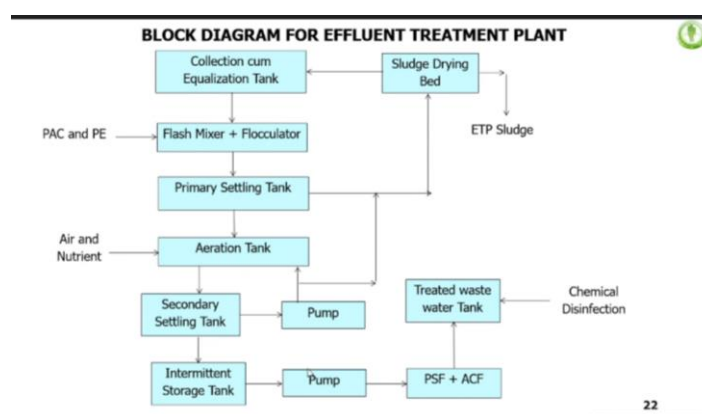
- 1) Incinerator - 1 unit of 75kg/hr capacity. With diesel as fuel, wastes will be burned in fully automatic burners having two chambers and retention time of 2 sec will be maintained. Primary chamber will operate at a temperature  $850^{\circ}\text{C} \pm 50^{\circ}\text{C}$  while Secondary chamber  $1050^{\circ}\text{C} \pm 50^{\circ}\text{C}$ . Air Pollution Control Devices like Venturi Scrubber, Packed Bed Scrubber, ID

- Fan, Combustion Fan and Stack height of 30m with diameter of 200mm will be provided.
- 2) Autoclave: To decontaminate and sterilize wastes, a horizontal, high speed steam sterilizer having capacity of 150 ltrs/batch operating at 121°C and 15 psi pressure is proposed.
  - 3) Shredder: Medium series Twin shaft shredder running at 20HP, 15Kw which is provided with 5 blades (3 movable blades and 2 fixed blades) will be used to cut segregated disinfected wastes into 10-25mm of plastic, agro wastes or paper in appropriate size as per pollution norms.
  - 4) Diesel Generator Set: A 150KVA DG Set will be installed for emergency power supply. The set will be provided with Stack height of 12 m and diameter of 155mm,
  - 5) CAAQMS: To ensure the ambient air norms, Continuous Ambient Air Quality Monitoring System (CAAQMS) is to be provided by which parameters like SPM, HCl, NOx etc will be continuously monitored.
  - 6) Emission standards as prescribed CommonBMW Treatment and disposal guidelines will be achieved.

## 7. WATER CONSUMPTION, GENERATION AND WATER POLLUTION:

Total water requirement in the plant is about 20 KLD. About 10.6 KLD wastes water will be generated from process and treated in ETP. About 7 KLD of effluent will be recycled to meet the water consumption. Waste water generated from domestic use will be treated in Sewage Treatment plant (STP) and about 3.5 KLD from STP will also be recycled. With these, fresh water requirement for the whole plant will be reduced to 9.5 KLD.

ETP leh STP-a tuichhia tih thianghlim dan tur kalhmang te ahnuaiia block diagram hmangina hrilhfiaw bawh



## 8. EIA BASELINE MONITORING:

As the proposed project falls under Category B project activity 7(da) as per the EIA Notification 2006, the Terms of Reference was obtained from the State Environment Impact Assessment Authority vide letter No. B16012/6/2019-SEAC/166 dated 19.03.2020. Hence, EIA study was carried out by M/s ENPRO

Enviro Tech and Engineers Pvt.Ltd and baseline monitoring was carried out during 1.12.2020 to 28.02.2020 by NABL accredited M/s Quallisure Laboratory Services.

#### **A. AMBIENT AIR QUALITY MONITORING AND ITS MITIGATION:**

Ambient air quality parameters such as SPM, PM<sub>2.5</sub>, So<sub>x</sub> , NO<sub>x</sub>, HC, NH<sub>3</sub>,Co, PAH, VOCs were monitored twice a week at six location namely near the Project site, Aizawl City, Thingsulthiah village, Sesawng village, Tuirial village and Muthi village. All the parameters monitored were found to be well below the limit as per the National Ambient Air Quality Standards.

The mitigation measures are to be adopted for air pollutants to control impacts of pollutants such as dust particles, HCl and NO<sub>x</sub> in the ambient air. These are:

- Incinerator proposed to be designed as per CPCB guidelines with best available technology and provided with Air Pollution Control Device. Desired stack height will be maintained.
- To neutralize acidic gases and organic constituents, caustic is to be injected into the incinerator.
- For removal of particulate matter and acidic constituents, gas quencher, high pressure drop venture scrubber and packed back scrubber will be utilized.
- Carbon injection system is to be provided for elimination of rare mercury vapor, hydrocarbons, dioxins and furan contents in incineration flue gas.
- Estimation or study when the facility is in operation is also carried out. The incremental ground level concentration (GLC) was estimated to be as: TSPM:1.22µg/m<sup>3</sup>, HCL:1.22µg/m<sup>3</sup>, NO<sub>x</sub>:10.22µg/m<sup>3</sup> based on which the total concentration due to the project activity was found to be below the prescribed standard as given in CPCB in all monitoring stations.

#### **B. WATER QUALITY MONITORING AND MITIGATION:**

Water quality assessment was done form two(2) surface water sources namely Tuirial and Chite rivers and four(4) ground water source, namely tubewells from Thingsulthiah and Sesawng village and hand pumps from Tuirial village and Aizawl city.

- For surface water, the qualites were found to conform to the CPCB-1979 and Bureau of Indian Standard limits except BOD level which was relatively higher thus requiring conventional treatment of water followed by disinfection incase water is to be used for drinking.
- For ground water samples, presence of coliform was found in tuirial handpump sample, and E.coli in samples collected from Sesawng tubewell and Aizawl city handpump. Boiling, chlorination, disinfection or UV treatment of water is thus suggested before drinking.
- However, there will be no impact on the water body due to project activity. The main sorce of water will be through the government water supply from

Solid Waste Resource Management. Centre. No waste water will be discharged outside the premises.

### **C. NOISE LEVEL MONITORING AND MITIGATION:**

Ambient noise monitoring was done at six locations which were found to be within the prescribed limit.

For mitigation of the impact of noise level the following measures were proposed to be followed:

- Proper and timely maintenance of machineries and restricted movement of vehicles during late evening and night time.
- Equipments such as fans, blowers and shredder will be selected such that the noise level is less than 85dB when noise level is measured from 1m from the equipment.
- High noise generating equipments will be installed in closed room to reduce noise level.
- Workers will be provided with earplugs and ear muffs.
- Greenbelt development within the boundary and along the road of the project site.

### **D. SOIL QUALITY MONITORING AND MITIGATION:**

Soil samples were collected from the study area and interpreted referring to the book "Interpreting Soil Test Results". Based on the samples collected the following interpretations were made. The pH of the soil was moderately acidic to neutral. The texture was predominantly sandy clay loam and the soil was found to be low in calcium.

For the mitigation the following method is to be adopted

- Contaminated soil from spillage/ leakage or dropping of the bio-medical or hazardous wastes will be recovered from the ground. Packed, stored and sent as hazardous waste for disposal in TSDF.
- All reusable and recyclable waste will be reused or recycled within the premises.
- All bio-medical wastes shall be unloaded in a designated area and stored category wise in designated storage area and hazardous wastes viz incineration ash and ETP sludge will be stored separately as hazardous wastes.
- Leachate from the storage area will be sent to ETP.
- Monitoring of the soil will be done as per Environmental Monitoring Plan.

### **E. ECOLOGY AND BIOBIVERSITY STUDY:**

The proposed project site consists of dense vegetative cover and consists of dense bamboo patches with teak trees near the boundary of the site. Few weeds and shrubs were also found. The site also consists of good number of native trees

mentioned in EIA Report which will be retained in maximum possible way. No rare, endangered, endemic or threatened (REET) plant in the core zone. Tuirial Reserve Forest was found within 10 km of the study area which however is mentioned in the official website of the Mizoram Forest Department and not in the topsheet and survey of the India map.

No major faunal species and none of the terrestrial species were listed in Schedule I of the Wildlife Protection Act, 1972 as amended in 1991.

## **9. PROPOSED CER ACTIVITIES:**

Rs 20.76 lakhs has been allocated for CER Plan, for which a five year plan is proposed. The funds will be allocated for health care schemes, community RO Plant, Sanitation campaign, vocational skill development and concrete road development.

## **10. ACTION FOR GREEN BELT DEVELOPMENT:**

Out of the total area 1655m<sup>2</sup> (33%) is provided for green belt development. A total of RS 16 lakh financial budget for five years is proposed to develop the habitat.

## **11. COST PROVISION FOR ENVIRONMENTAL MEASURES**

A Capital cost of Rs 80.5 lakhs with a recurring cost of Rs 39.65 lakhs have been allocated for Environmental Pollution Control and monitoring as well as to ensure occupational health of the workers.

## **12. ESTIMATED MAN POWER REQUIREMENT AND BENEFITS OF THE PROJECT:**

The consultant highlighted the following points:

- Sixty (60) temporary workers are to be employed during construction phase.
- Sixty five (65) including 15 unskilled, 30 semi-skilled and 20 skilled workers to be employed when in operation.

The following are the benefits of the project:

- Improvement of rural infrastructure, skill development and overall quality of life.
- Sustainable development of the area including further physical infrastructural development.
- Improve disposal and reduced generation of bio- medical waste in the district thus leading to hygienic condition.
- Provision of direct and indirect job opportunities to the local people.

He mi hnu hian Inkhawm kaihruaitu Deputy Commissioner chuan lawmthu sawi in Er. Lalrothanga, Project Director, SIPMIU leh CEO Aizawl Smart City chu an project chungchang hrilhfhahna tlangpui mizo tawnga khaikhawm turin a sawm leh a.



Er. Lalrothanga chuan damdawiin bawlhhlawh hi buaipui tham a tlin thu leh Central Sawrkar in a a ngaihven zia sawiin, damdawiin bawlhhlawh sawngbawlna dan tur hi Bio- Medical Waste Management Rules, 2016 in a ruahman anga an siam a nih thu leh he hmuna bawlhhlawh an sawngbawl dan tur chu hetiang hian a sawi:

- Damdawi in 150km bial a awm te hian bawlhhlawh sawngbawlna hmun pakhat an in tawm thei. Chutiang chuan Aizawl, Kolasib, Mamit leh Serchhip District ten an hmang tangkai thei ang.
- Mizoram Pollution Control Board-in zirna a neih atanga damdawiin bawlhhlawh hal ral chi te, pressure hmanga tihthianghlim chi te, khawl hmanga tih chip chi leh chemical leh tui hmanga tih thianghlim ngai bawlhhlawh chi hrang hrang milin tuna sawngbawlna hmun hi ruahman a ni.
- Damdawiin bawlhhlawh chi hrang hrang hi a hmunah rawng hrang chi li ( a eng, a sen, a pawl leh a var) a thiarhran anih hnuah a dahthatna tur hmunah dah a ni ang a. Chuta tangin Tuirial a sawngbawl tura phurh a ni ang.

Sawngbawlna hmanrua ruahhman te chu

1. Incinerator: Bawlhhlawh halralna tur ( mihring taksa peng hrang hrang) hi hal ani ang a. 1050°C ah heng bawlhhlawh hi hal ral ani ang. Halralna tang hian a vap tlem te hi a paihna hmuna paih a ni ang. Mei khu awm pawh hi scrubber hmanga tih fai a ni ang.
2. Autoclave: Heta hian rawng sen lam bawlhhlawh tih thianghlim a ni anga. Khawl hian pressure hmangin bawlhhlawh a tithianghlim ani. He khawl hian presuure ( nekna) nasa tak inchi 1 a 15 pound leh 121°C - a satna hmangin natna hrik awm zawng zawng chu a ti hlum a ni.
3. Shredder: He khawl hi bawlhhlawh tih sawmna tur a ni a, bawlhhlawh bawm rawng pawl (blue) - a bawlhhlawh te, tui leh chemical hmanga tih thianghlim a nih hnuah thial sawm tir ani ang. Bawlhhlawh hi hmannawn anih loh nan tih sawm ani. Tih sawm hnu-ah recycle unit (thil danga siam lehna) ah pek leh a ni ang.
4. Effluent Treatment Plant: Khawl hman na atanga tuichhia chhuak ho hi he plant ah hian tihthianghlim a nih hnu ah chauh paih chhuah a ni ang.

Hazardous Waste Management Rule, 2016 in a duan angin bawlhhlawh lo lut zawng zawng hi a a thehthang a ni dawn a ni.

Bawlhhlawh paihna intawm tur hi din a nih hmain Sawrkar in a ruahman angin a hmun leh nungcha a nghawng dan tur zir chianna (Environment Impact Assessment) hi neih hmasak tur a ni a. He zirchianna hi CBMWTF dinna tur atanga 10 km bialah thla thum (3) chhung neih a ni. Zirchianna hi hlawm li(4) : lei, boruak, tui leh ri ah te neih a ni in hengah te hian teh fung/phal chin aia chi li(4) hniam/ tlem lutuk tih hmuchhuah ani a, a then te chu tehna khawl pawn a tlem lutuk avanga teh theih loh an ni.

Environment Impact Assessment notification 2006 in a duan angin SEIAA/ SEAC kal tlangin he project hian Environmental Clearance a neih theih nan draft EIA siam a ni bawka a ni.

He zirna atang hian heng te hi hmuchhuah ani

- Mipui leh ram hriselna leh vantlang tan a tha a, a chhan chu damdawiin bawlhhlawh hi nasa takin a ti tlem dawn a ni. A sawngbawl dan mumal tak nei in a tih riral na hmuna thehthang ani ang.
- Thalai te tan eizawna leh in hlawnna siam ang.

*He khaikhawmna zawh hian Chairman chuan vantlang mipui te tan sawina/ rawtna/ zawhna hun a hawng a. Hengte hi zawhna leh chhana te chu an ni:*

**Zawhna 1 na:** Dr Laldinpuia, Dept of Geology, MZU

Pi Chairman, hun I hawn chuan zawh duh ka nei a,

Tuna rawn sawi ang khan Landfill te kha a ngai dawn a, ash te, ETP sludge te, battery te bakah plastic wastes te tih the ( shredding) hnu ah authorized recycler ah thawh a ni ang tih kha Recycler te chu State danga tanga lo kal tur nge, Mizoram chhungah hian a awm ve reng? ETP sludge /Sewage sludge te kha gardening a hman tur khan ruahmanna a awm sa em?

EIA kha ngun takin ka lo chhiar in project pawh a tha khawp mai a. Mak ti deuh hlek erawh ka nei. Geology kaihnauih lai kha geologist ka nih a vangin ka lo en deuh bik a. Chu chu report- a ground water a awm lo vang tih in ziakkha a ni. A awm leh awm loh hriatna tur Core Bore drilling kha an nei lo niin ka hria a. Hei hi ground water awm loh thu report a nih chuan a assessment result te pawh report ah an dah tel tur ah ka ngai a. Dah tel loh hian a fuh lo thei ang em? Draft stage a la ni bawka, a ennawn leh theih ang em?

Tin, infrastructure lian tham leh Kan ram tana hlu tak tur a nih avangin SPT test leh soil bearing capacity value hriat theih ni ta se. Environmental assessment a nih rualin seismic vulnerable ram kan nih si avangin assessment report-ah hian a bilh tel theih lawm mi? An ziaik tel thin thovin ka hria a, a la belh thei em?

Heng bakah Landfill - na tur hmun te ruahman lawkna a awm tawh em.

**Chairman:** Pu Laldinpuia, a lawmawm e. I thahnemngaihna a fakawm hle mai. Kan lawm e. Kan engineer mithiam te khan a theih theih han chhang se la, a theih vek loh pawh ni mai thei e. Rawtna leh comments kha kan lo note down tur kha a ni deuh mai a. Amaerawhchu a pawimawh em em a, entiran seismic vulnerability tih te, sludge leh ground water chungchanga zawhna awm ang te kha chhan theih a nih chuan han chhang ila, chhan theih loh a nih pawhin nakina hotu sang zawkah leh mithiam zawk te hnena la refer ngai a nih chuan lo note down zel ila a tha ang e.

Kei hi meeting dang ka neih avang hian kan Adtional Deputy Commissioner, Pu R. Vanrengpuian chair hi a la chhun zawm mai ang a, meeting pawimawh tak a nih vangn members te leh audience te hriatthiamna ka ngen nghal bawka ni.

**Chhana :** Pu R. Lalrothanga, CEO, ASCL

“Pi Chairman ka lawm e A lawmawm hle mai. Thil in lo chik hle a ni tih a Chiang a. Tuna bio medical wastes management project-ah hian 30% of the whole plot kha hmun hring a ni ang a ti a, churang chuan 5000 Sq m minimum kha kan dah nghe nghe a, chu chu danin a sawi dan pawha ni a. Churang chuan sludge kan tih te leh manure ang deuh chi ho kha gardening atan a hman theih tih a ni thin a ni.”

“A dang lehhah chuan ground water a awm lo ang tih lai kha, an ziaik sual a nih loh chuan helaia kan mean zawk chu a bul velah ground water extraction tube well a awm lo tih tumna zawk niin ka hria a. Chumi avang chuan ground water sampling pawh kha a bul hnaivaiah lak a ni nghe nghe a ni.”

“SPT leh soil bearing capacity tih chungchangah chuan khulai ah khuan structure lian pui dah tur a ni lem lo va, tin, high rise building emaw multi storey building emaw din tur ni lovin building pakhat ,a chhawng pawh ni lo awm mai tur a nih dawn a. He building pawh hi design details a awm hunah soil exploration la kal pui tur ani. Tin, SPT emaw leh laboratory testing ngai chi chu IS code -in a tih dan angin project dangah pawh hian kan kalpui dan a ni a, Tunah pawh hian Aizawl ah hian hmun 6/7 velah zawn lai kan nei a a ni.

“Plastic recycler chungchang ah chuan tunah pawh hian plastic leh multi layered plastic hi Tuirial tangin Dalmia Cement plant ah an thawn turin an phur chhuak zung zung tawh a. An ni khu hal ral thei tura phalna leh a halralna khawl furnace leh scrubber nei tha an ni a. Tin, authorised dealer leh authorised loh tih chungchanga authority tur kha chu AMC te emaw hemi enkawltu tur a din society te nena la kal chhoh pui tur a ni ang a. Khulai atanga chhuak tura chu a him tawh dawn a ni. Tin, in lo thlirin ka ring a.. khu ta tanga effluent reng reng surface water ah emaw ground water- ah emaw nasa taka luang chhuak leh tur kha a awm tawh dawn lo va,ETP atanga luang chhuak leh tur pawh a quality mumal takin a awm dawn a ni. Tin, khawl zawng zawng a bikin incinerator hi SCADA in monitor a ni dawn a ni.”

*He mi zawh hian Chairman chu meeting pawimawh dang a neih avangin panel member te leh mipuite hriathiamna dil chungin Pu R. Vanrengpuia, Additional Deputy Commissioner, Aizawl hnen ah vantlang inkhawm lo kaihruai chhuanzawm trin a sawm a.*

## **Zawhna 2: Dr Laldinpuia:**

“Geology kha as a tlangpui kan ziaik a, geological data kha detail a awm lo va, kha kha EIA ah pawh khan awm tho va,. Geology & Mineral Resources Department Directorateah geologist an awm tho va, khang kha kha kan hmang lo em ni aw. A rock formation ziah dante pawh kha a dik lo khawp mai a. kha kha chua in hnaih lutuk lo bawk a, ka rawn sawi chhuak ta lo va, mahse final hunah te a geology kha khatiang nuaih lo khan ziah ni ta se tih kan belh leh lawk a ni e. “

“Damdawiin bawlhhlawh hal atanga a khu chhuak kha a hlauhawm viau thei ang em?. plastic te pawh a lo tel thei bawk a. Tin, thlitfim hnuah mipui te tan eng chena him nge a nih ang? A thlifimtu khawl te khan eng chen nge a ven theih tih te a sawi belh theih em?”

## **Chhana : Pu R. Lalrothanga, CEO, ASCL**

“A gas lo chhuak te hi kan khawl hman tur hian a veng thei tur a ni a. Tin, Mizoram Pollution Control Board hian incinerator, a nih tur ang ni lo chu hman an phal lo hrim hrim a. Chuvangin, khawl design mumal tak time tested leh India ram hmun danga damdawiin bawlhhlawh (bio medical wastes) sawngbawl nana lo hman tawh thin ang kha hman a ni dawn a. Chuvangin a khu hi chu mihring mai ni lo environment tan hlauhawm lo turah kan ngai.”

*Inkhawm kaihruiatu Pu R. Vanrepuia Addl. Deputy Commissioner chuan Pu Dinpuia, chik taka a lo zir chian avanga lawmthu hrilhin a ngaihdan te rawtna te chhinchhiah vek a ni thu a sawi a*

**Zawhna 3: Lalventluanga:**

“Project proposal hi atha hmel khawp mai a. Management plan chungchangah zawhna pahnih ka nei a. Chung te chu Facility hian Aizawl bakah district dang a huam tel dawn tih kha kan ngaithla a. Heng district dang atanga transportation/ bawlhhlawh phur dan chungchang a hmalak dan tur hi sawifiah theih ani em? Damdawiin bawlhhlawh phur tur a ni sia, khaihlak leh buaina te a awm thei ang em?”

“A pahnihna ah chuan Damdawiin a awm nual si a, bawlhhlawh pahina/sawngbawlna in daih loh a awm thei ang em? In daih lohna avangin “open dumping” kan tih mai hi a thleng thei ang em? Tin, hnathawktu te hibawlhhlawh sawngbawl dan turah hian training an nei em? Awareness te pek an ni ang em?”

**Chhana: Pu R. Lalrothanga, CEO, ASCL**

“He project hian district dang atanga motor lo kal tur te hi a keng tel vek a. pahnih an nei zel dawn a, pakhat a kal chuan pakhat a haw ang a, in sul pel a khailak miah lo tura ruahmana siam a ni a. Tin khawi khawiah emaw n pah mai ang em tih chungchangah chuan, kan motor te hi SS304 (Stainless Steel) a thuam ani vek dawn. Tin, kawng laka an lo peng emaw, an lo muang emaw an tlan dan endik turin motor-ah GPS Tracking system dah vek tum a ni bawk.”

“Project hi kal lai mek, pawm a ni dawn em tih buaipui lai a la nih avang hian hnathawktu lak a la ni lova. He hna hi fimkhur ngai leh thiama bik ngai a nih avangin training neih ngei a ngai dawn a ni. Tin, hnathawk te hriselna “occupational health” gthlenga vil tu tur society din in a ruangam pawh siam a ni tawh a.”

*Chairman hian he vantlang inkhawm na a tel te hi inthlahrung miah lovin zawhna zawt turin a ngen thar pah in vantlang inkhawm minute chhiarchhuah tura buaipui mek ani tih mipui a hriattir ani.*

**Rawtna: Dr Laldinpuia.**

“Executive Summary, Mizo tawngah khan lung hming kan ziah dan kha ‘shell’ kha ‘lungkelha’ tiin kan dah a, ‘tlak lung’ tih zawk tur a ni a. ‘Lung chang ve deuh’ ti a kan dah ‘silt stone’ kha Lungkelha tih zawk tur a ni a. Sand stone kha balu /balu lung a ni thung.”

*Chairman chuan tluang tak leh ngaihtuahna tamtak senga he vantlang inkhawm na a tel ho hnenah lawmthu sawiin Er, Lalrothanga lawmthu sawi turin a sawm ani.*

*Er. Lalrothanga chuan Deputy Commissioner, Additional Deputy Commissioner leh program tluang taka kalpui theih anih theih nan a Mizoram Pollution Control Board bakah, Department, state sawrkar a Committee hrang hrang te leh mipui te hnenah hi a khar lawmthu a sawi a. Lawmthu sawi hnu hian Chairman hian vantlang inkhawm hi khar a ni.*