## III.ENVIRONMENTAL PROTECTION

Version 1

(5<sup>th</sup> October 2015)

#### III. Environmental Protection

As for environmental protection for setting up a business and commencement of commercial operation by an investor in Thilawa Special Economic Zone (TSEZ), the following actions are requested in the three stages; "Preparatory stage for starting construction", "Construction stage", and "regular operation stage".

#### Step 1: Preparatory stage for starting construction

#### **ECPP Preparation**

- An Investor, which obtained the Investment Permit issued by Thilawa Special Economic Zone Management Committee (TSMC) and the Company Registration Certificate issued by the DICA Section of OSSC, may apply for <u>Environmental Conservation</u> <u>and Prevention Plan (ECPP)</u> for starting construction work.
- 2. The Investor prepares the draft ECPP application after downloading ECPP application form and submits necessary documents (draft version of ECPP) either in person or online to Front Office of OSSC.
- The Environment Section of OSSC reviews the draft ECPP and appraises the submitted ECPP considering necessity of IEE or EIA in accordance with the criteria defined by TSMC.
- 4. The Front Office of OSSC delivers the comments on draft ECPP including judgment of necessity of IEE/EIA to the Investor within ten (10) working days.
- 5. The Investor submits required documents (final ECPP with cover letter) either in person or online to Front Office of OSSC.
- 6. The Environment Section of OSSC reviews final ECPP and appraises the submitted ECPP taking MJTD's comments into consideration and prepares an approval of ECPP.
- 7. After receiving the approval of the TSMC, the Front Office of OSSC delivers the approval of ECPP to the Investor within 10 working days.

#### **IEE/EIA Study (if required)**

- The Investor, which is <u>requested to implement IEE/EIA study</u> judged by TSMCTSMC through appraisal of ECPP, shall complete the IEE/EIA study <u>before</u> <u>commencement of commercial operation</u> by independent third party organization(s)/consulting firm(s).
- The Investor submits necessary documents (<u>Draft IEE/EIA Report in English</u>, <u>Summary of IEE/EIA Report in English and Myanmar</u>, and cover letter) with the request of arrangement of <u>Public Disclosure (PD) and Public Consultation Meeting</u> (<u>PCM</u>) to the Front Office of OSSC.

- 3. The Investor (or Independent third party organization(s)/consulting firm(s) which will conduct IEE/EIA study) arranges and implement PD and PCM in accordance with procedures of OSSC.
- The Environment Section of OSSC reviews draft IEE/EIA Report and appraises the submitted draft IEE/EIA Report, in case of EIA report, taking comments from MOECAF's into account if necessary.
- Environment Section of OSSC issues Notification of Comments to the Investor through the Front Office of OSSC within 30 working days for IEE Report and 60 working days for EIA Report, respectively.
- The Applicant submits required documents (Final IEE/EIA Report in English, Summary of IEE/EIA Report in English and Myanmar, and cover letter) to the Front Office of OSSC.
- After reviewing final IEE/EIA Report, the Environment Section of OSSC issues Approval of IEE and Approval of EIA to the Applicant through the Front Office of OSSC within 15 working days for IEE Report and 30 working days for EIA Report, respectively.

#### **Step 2: Construction stage**

- During construction stage, the Investor/ the Contractor shall implement Environmental Mitigation Measures and Submission of Monitoring Report in accordance with the submitted ECPP and receives <u>two or three times inspections</u>; inspection(s) at construction stage (after 4 months from the start of construction and incase of the after 12 months) and inspection at before commencement of commercial operation.
- 2. The Inspector from Environment Section of OSSC conducts the Inspection at the Project Site according to the checklist items to be inspected with attendance of the person in charge of the Contractor /the person in charge of the Investor.
- 3. When instructions for the improvement of environmental mitigation measures are pointed out by the Inspector, those instructions shall be described in the Record of Environmental Inspection with expected countermeasures to be taken by the Contractor/the Applicant.
- 4. The Inspector prepares the Record of Inspection.
- 5. Within three (3) days after each Inspection, Environment Section of OSSC sends the record of Environmental Inspection to the Applicant.
- 6. Instructions for the improvement of environmental mitigation measures which is pointed out by the Inspector shall be implemented by the Contractor/ the Applicant. The countermeasures taken by the Contractor/ the Applicant shall be described in next Environmental Monitoring Report.

7. If any special instructions, special report related to countermeasures of instruction by the Inspector shall be requested within a certain period. Then, the Applicant submits the special report to the Front Office of OSSC and the Environment Section of OSSC evaluates the performances of the Applicant and reports to the TSMC and OSSC.

#### **Step 3: Regular Operation Stages**

- During regular operation stage, during construction stage, the Investor/ the Contractor shall implement Environmental Mitigation Measures and Submission of Monitoring Report in accordance with the submitted ECPP and receives <u>the first inspection after</u> <u>4-6 months from the start of commercial operation</u> and additional inspection after the first inspection as necessary.
- 2. Detailed procedures of the regular operation stage are to be developed.



Figure III-1: Overall Procedures for Environmental Management in Thilawa SEZ Zone A

#### Criteria for requirement of IEE/EIA

Some Investor(s) which may cause adverse environmental impacts may be required to conduct IEE or EIA. The Thilawa SEZ Management Committee judges necessity of IEE or EIA based on the draft ECPP prepared by Applicants in accordance with the following criteria.

No.	Criteria	Items
1	Requirement of IEE or EIA in	(a) Sectors, IEE or EIA based on
	accordance with existing criteria	production capacity, production area, etc.
2	Facing to Residential and Monetary Area	(a) Facing or Not facing
3	Air pollution	(a) Installation of combustion facilities such as boilers,
		furnaces, engines etc.
		(b) Materials used for combustion facilities
		(c) Generation capacity of combustion facilities
		(d) Amount of Emission Gas
4	Water Pollution	(a) Amount of wastewater discharge
		(b) With toxic or Without toxic
5	Soil Contamination	(a) Possibility of infiltration or leaking of toxic substances
6	Noise and Vibration	(a) Facing to residential area or Monastery area with heavy
		machinery operation or without heavy machinery
		operation
		(b) Not facing to residential area or Monastery area with
		heavy machinery operation or without heavy machinery
		operation
7	Odor	(a) Facing residential area and using odor substances
		(b) Not facing residential and monastery area but using odor
		substance
8	Hazardous and Chemical Substance	(a) Amount of hazardous and chemical usage
9	Occupational Health & Safety	(a) Including dangerous works
		(b) Using VOC
		(c) Using toxic substances
10	Other environmental element founded by	(a) Based on International Guidelines
	Expert	(b) Practical experiences

#### Table: Criteria for requirement of IEE/EIA

#### <u>Revising</u>

Criteria for requirement of IEE/ EIA shall be reviewed and revised every three years at the beginning of the Myanmar fiscal year (April).

#### Tasks of IEE/EIA Studies

An Investor required to conduct IEE or EIA study shall follow Myanmar draft EIA procedures basically. On the other hand, the EIA study on development of infrastructure of the Zone A was prepared by Myanmar and Japan Thilawa Development Ltd. (MJTD) and approved by the Thilawa SEZ Management Committee in December 2014. MJTD has implemented environmental management and monitoring activities in accordance with their Environmental Management Plan (EMP). As for environmental management by investors, MJTD prepares internal regulations including environmental standards, prohibited activities, necessary mitigation measures. In this connection, tasks for IEE or EIA study are minimized as shown in the following table.

Item	IEE Study	EIA Study	Note
1) Implementation body of IEE or EIA study	Same as EIA procedures	Same as EIA procedures	-
2) Screening	Original criteria developed by TSMC	Original criteria developed by TSMCTSMC	Screening criteria is based on pollution (Air, water, soil contamination, hazardous substance etc.)
3) Alternative study	Not required	Nor required in case that Investment license is issued	Location and project description is fixed and approved by TSMCTSMC through investment approval.
4) Approval of Scoping and TOR	Not required	Not required	Investor prepares ECPP instead of Scoping and TOR.
5) EIA investigation	Not required	Possible to utilize existing data on EIA study for Zone A Development Project as much as possible	-
6) Public consultation meeting	[Residence are located within 150m from the boundary] One time at the stage of IEE report [Residence are located more than 150m from the boundary] Not required	At least one time at the stage of draft EIA report	People have already known construction of factories/ entities in Thilawa SEZ and the EIA study for Zone A Development Project had already disclosed and approved.
7) Public disclosure	One time at the stage of draft IEE report	At least one time at the stage of draft EIA report	Ditto
8) IEE/ EIA Report	Same as EIA procedures	Same as EIA procedures	-
9) Approval of IEE/ EIA report	Notification of comments by TSMC within 30 days after submission of draft IEE report Approval by TSMC within 15 days after submission of final IEE report	Notification of comments by TSMCTSMC within 60 days after submission of draft EIA report Approval by TSMC within 30 days after submission of final EIA report	-
10) Environmental Compliance Certificate (ECC)	Issuing approval letter by TSMC	Issuing approval letter by TSMCTSMC	To be decided
11) Appeal process	To be decided	To be decided	To be decided
12) Monitoring frequency	Same as EIA procedures	Same as EIA procedures	-

Table: Tasks of IEE/EIA Study in Thilawa SEZ Zone A

1. Approval of Envir	onmental Conservation and Prevention Plan
Necessary Documents submitted by Applicant	1. ECPP application in English (FORM-EN1-2) (Draft version) with required attached documents
	2. ECPP application in English (FORM-EN1-2) (Final version) with required attached documents
	3. Cover letter for ECPP (FORM-EN1-1)
Number of documents	In case of submission in hard copies:
to be submitted	For Submission of ECPP Application (Draft version)
	Hard copies: 2 sets (1 Original, 1 Copy), Soft copies: 1 CD
	For Submission of ECPP Application (Final version)
	Hard copies: 3 sets (1 Original, 2 Copies), Soft copies: 2 CDs
Actual Procedures	For Submission of ECPP Application (Draft version)
	<ol> <li>The Applicant prepares the draft ECPP application after downloading ECPP application form (FORM-EN1-1 and FORM-EN1-2).</li> <li>The Applicant submits necessary documents (draft version of FORM-EN1-2) either in person or online to the Front Office of</li> </ol>
	<ul> <li>OSSC.</li> <li>3. The Environment Section of OSSC reviews the draft ECPP and appraises the submitted ECPP considering necessity of IEE or EIA in accordance with the criteria.</li> <li>4. The Front Office of OSSC delivers the comments on draft ECPP including judgment of necessity of IEE/EIA to the Applicant within ten (10) working days.</li> </ul>
	For Submission of ECPP Application (Final version)
	<ol> <li>The Applicant submits required documents (FORM-EN1-1 and FORM-EN1-2) either in person or online to the Front Office of OSSC.</li> <li>The Environment Section of OSSC reviews final ECPP and appraises the submitted ECPP taking MJTD's comments into consideration.</li> </ol>
	<ol> <li>The Environment Section of OSSC prepares an approval of ECPP and the TSMC approved it.</li> </ol>
	4. The Front Office of OSSC delivers the approval of ECPP to the Applicant within 10 working days.
Application Fee	None
Time Frame	<ul> <li>10 working days for appraisal of ECPP Application (Draft version) with the judgment of the necessity of IEE/EIA</li> <li>10 working days for reviewing ECPP Application (Final version)</li> </ul>
Remarks	-

#### 1. Approval of Environmental Conservation and Prevention Plan



Figure III-2: Procedures for ECPP Application, Environment Section of OSSC

2. Submission of Draft IEI		
Necessary Documents to be submitted by Applicant	<ol> <li>Draft IEE/EIA Report in English</li> <li>Summary of IEE/EIA Report in English and Myanmar</li> <li>Cover letter for submission of draft IEE (FORM-EN2-1)/ draft EIA (FORM-EN3-1)</li> </ol>	
Number of documents to be submitted	In case of submission in hard copies: Hard copies: 3 sets (1 Original, 2 Copies) Soft copies: 2 CDs	
Actual Procedure	<ol> <li>The Applicant submits necessary documents either in person or online with the request of arrangement of PD and PCM to the Front Office of OSSC.</li> <li>The Environment Section of OSSC arranges official letters for conducting Public Disclosure (PD) and Public Consultation Meeting (PCM) and the Front Office of OSSC distributes the official letters to the Applicant within 5 working days.</li> <li>The Environment Section of OSSC reviews draft IEE/EIA Report and appraises the submitted draft IEE/EIA Report, in case of EIA report, taking comments from MOECAF's into account if necessary.</li> <li>The Environment Section of OSSC issues Notification of Comments to the Applicant through Front Office of OSSC within 30 working days for IEE Report and 60 working days for EIA Report, respectively.</li> </ol>	
Application Fee	None	
Time Frame	-30 working days for appraisal of IEE Report -60 working days for appraisal of EIA Report	

#### 2. Submission of Draft IEE/EIA Report

Remarks	1.	It shall be noted that the IEE/EIA study should be conducted
		by an independent third party organization/consulting firm

#### 2-1) Conducting of Public Disclosure (PD)

Necessary Documents	1. Summary of IEE/EIA Report in Myanmar
	2. Official Letter from Environment Section of OSSC
	3. Notice for public disclosure
	4. Comment forms
Place to disclose to Public	<ol> <li>(1) General Administration Department, Yangon South District</li> <li>(2) General Administration Department, Thanlyin Township</li> <li>(i) Hpa Yar Kone Village Tract Office</li> <li>(ii) Let Yet San Village Tract Office</li> <li>(iii) Ah Lun Soke Village Tract Office</li> <li>(3) General Administration Department, Kyauktan Township</li> <li>(i) Aye Mya Thi Dar Ward Office</li> <li>(ii) Shwe Pyi Thar Yar Ward Office</li> </ol>
	(iii) Thi Tar Myaing Ward Office
	(iv) Shwe Pyauk Village Tract Office
	(v) Nyaung Waing Village Tract Office
	(4) Thilawa SEZ-Management Committee Office
	(5) Myanmar Japan Thilawa Development Limited Office
Number of documents to be	Item (1) - 2 copies at each place
submitted	Item (2) - 1 original at YSD-GAD and 1 copy at each other place
	Item (3) - 2 copies at each place
	Item (4) – 5 copies at each place
Actual Procedure	<ol> <li>After receiving the official letter from the Environment Section of OSSC, the Applicant (or Independent third party organization(s)/consulting firm(s) which will conduct IEE/EIA study, hereafter referred as "Third Party Organization") distributes the required documents at each described office before expected public disclosure date.</li> <li>The Applicant (or Third Organization) takes the evidence/status of public disclosure.</li> <li>The Applicant (or Third Party Organization) collects the comments from each office after at least ten (10) working days of public disclosure.</li> <li>The received comments from public shall be reflected in final IEE/EIA report.</li> </ol>
Period for public disclosure	10 working days
Remarks	1. For IEE study, public disclosure shall be conducted one time at the stage of draft IEE report
	2. For EIA study, public disclosure shall be conducted at least one time at the stage of draft EIA report

#### 2-2) Conducting Public Consultation Meeting (PCM)

Necessary Documents 1. Official Letter from Environment Section of OSSC		
5	2. Notice for public consultation meeting	
	3. Comment forms	
Actual Procedure	1. After receiving the official letter from the Environment	
	Section of OSSC, the Applicant (or Independent third party	
	organization(s)/consulting firm(s) which will conduct IEE/EIA	

	study, hereafter referred as "Third Party Organization") invites to the invitees.	
	2. The Applicant (or Third Party Organization) takes the evidence/status of public consultation meetings.	
	<ol> <li>The Applicant (or Third Party Organization) collects comments from stakeholders, and affected persons.</li> </ol>	
	<ul> <li>4. The received comments from stakeholders and affected persons will be reflected in final IEE/EIA report.</li> </ul>	
Place to invite	see the attachment of list of invitees for PCM	
Remarks	<ol> <li>For IEE study, public consultation meeting shall be conducted one time at the stage of draft IEE report only if residence is located within 150m from the boundary of the project.</li> </ol>	
	2. For EIA study, public consultation meeting shall be conducted at least one time at the stage of draft EIA report.	

#### 3. Submission of Final IEE/EIA Report

Necessary Documents to be submitted	<ol> <li>Final IEE/EIA Report in English</li> <li>Summary of IEE/EIA Report in English and Myanmar</li> <li>Cover letter for submission of draft IEE (FORM-EN2-2)/ draft EIA (FORM-EN3-2)</li> </ol>	
Number of documents to be submitted	In case of submission in hard copies: Hard copies: 3 sets (1 Original, 2 Copies) Soft copies: 2 CDs	
Actual Procedure	<ol> <li>The Applicant submits required documents either in person or online to the Front Office of OSSC.</li> <li>The Environment Section of OSSC reviews final IEE/EIA Report and prepares approval of IEE/EIA Report.</li> <li>The Environment Section of OSSC issues Approval of IEE and Approval of EIA to the Applicant through Front Office of OSSC within 15 working days for IEE Report and 30 working days for EIA Report, respectively.</li> </ol>	
Application Fee	None	
Time Frame	<ul><li>-15 working days for appraisal of IEE Report</li><li>-30 working days for appraisal of EIA Report</li></ul>	
Remarks	1. Both comments from Environment Section of OSSC and Public shall be reflected in Final IEE/EIA Report.	

#### Annex-1: List of Invitees for Public Consultation Meeting

- 1) Minister, Yangon Region Government/ Member, Thilawa SEZ Management Committee
- 2) Director, Environmental Conservation Department in Yangon Division, MOECAF
- 3) Deputy Commissioner, General Administration Department, Yangon South District
- 4) Administrator, General Administration Department, Thanlyin Township
- 5) Administrator, General Administration Department, Kyauktan Township
- 6) Township Officer, Municipal Department, Thanlyin Township
- 7) Township Officer, Municipal Department, Kyauktan Township
- 8) Housing Department, Ministry of Construction, Thanlyin Township
- 9) Township Officer, Rural Development Department, Thanlyin Township
- 10) Township Officer, Rural Development Department, Kyauktan Township
- 11) Township Health Officer, Department of Health, Thanlyin Township
- 12) Township Health Officer, Department of Health, Kyauktan Township

- 13) Chairman, Thilawa SEZ Management Committee
- 14) Vice Chairman, Thilawa SEZ Management Committee
- 15) Secretary, Thilawa SEZ Management Committee
- 16) Members, Thilawa SEZ Management Committee
- 17) Myanmar and Japan Thilawa Development Ltd.
- 18) Members, One Stop Service Center, Thilawa SEZ Management Committee
- 19) Village Administrators and Villagers from related villages around TSEZ
  - I. Under Thanlyin Township GAD
  - (i) Hpa Yar Kone Village Tract Office
  - (ii) Let Yet San Village Tract Office
  - (iii) Ah Lun Soke Village Tract Office
  - II. Under Kyauktan Township GAD
  - (i) Aye Mya Thi Dar Ward Office
  - (ii) Shwe Pyi Thar Yar Ward Office
  - (iii) Thi Tar Myaing Ward Office
  - (iv) Shwe Pyauk Village Tract Office
  - (v) Nyaung Waing Village Tract Office
- 20) Relevant Companies/Factories in TSEZ
- 21) Other Organizations and individuals who are interested in the Project



 $^{\rm 1}~$  TSMC may request MOECAF to get comments on draft EIA if necessary.

FigureIII-3: Procedures for IEE/EIA Application, Environment Section of OSSC

Necessary Documents to be submitted by Applicant	Application Form for Environmental Inspection (FORM-EN4-1)	
Number of documents to be submitted	In case of submission in hard copies: Hard copies: 2 sets (1 set original and 1 copy) Delivery list : 1 Original to OSSC 1 Copy to JICA Study	
Actual Procedure	<ol> <li>The Application prepares application form for inspection after downloading the application form (FORM-EN4-1).</li> <li>The Applicant submits the application form (FORM-EN4-1) either in person or online for Implementation of Inspection at least 15 working days prior to the scheduled inspection date.</li> <li>The Front Office of OSSC informs the actual date of Inspection and the name of Inspector to the Applicant within 5 working days after the receiving the application.</li> <li>The Inspector conducts the Inspection at the Project Site according to the checklist items to be inspected with attendance of the person in charge of the Contractor /the person in charge of the Applicant</li> <li>When instructions for the improvement of environmental mitigation measures are pointed out by the Inspector, those instructions shall be described in the Record of Environmental Inspection (FORM-EN4-2)) with expected countermeasures to be taken by the Contractor/the Applicant.</li> <li>The Inspector prepares the Record of Inspection.</li> <li>Within three (3) days after each Inspection, the Environmental Section of OSSC sends the Record of Environmental Inspection to the Applicant.</li> <li>Instructions for the improvement of environmental mitigation measures which is pointed out by the Inspector shall be implemented by the Contractor/ the Applicant. The countermeasures taken by the Contractor/ the Applicant. The countermeasures taken by the Contractor/ the Applicant shall be described in next Environmental Monitoring Report.</li> <li>If any special instructions, special report related to countermeasures of instruction by the Inspector shall be requested within a certain period. Then, the Applicant submits the special report to the Front Office of OSSC.</li> <li>The Environment Section of OSSC evaluates the performances of the Applicant and reports to TSMC and OSSC.</li> </ol>	
Application Fee	None	
Remarks	<ol> <li>The application form shall submit to OSSC at least 15 working days prior to the scheduled inspection date.</li> <li>The presence of person in charge of the Contractor who manages implementation of ECPP in construction stage is requested to attend Inspections during construction stage.</li> </ol>	

#### 4. Implementation of Environmental Inspection during Construction Stage



*Figure III-4: Procedures for Environmental Inspection during Construction Stage, Environment Section of OSSC* 

Items to be checked
1. Pollution Control
Noise and Vibration
(i) Overnight/night time working and record
(ii) Notice/ Announcement to community
(iii) Installation of noise barrier
Turbid Water
(i) Settling tank in raining season
Septic Tank
(i) Toilet Installation & Nos.
(ii) Septic tank
(iii) Sludge removal/disposal

#### Annex-1 Checklist of Items for Environmental Inspection

Items to be checked
(iv) Record
Dust
(i) Watering/sprinkling (Frequency)
Exhaust Gas
(i) Operation of truck and machinery
(ii) Instruction to driver
Solid Waste
(i) Waste collection (garbage bin/box)
(ii) Storage condition (waste/recyclable waste)
(iii) Way of Disposal (frequency/amount)
(iv) Disposal site
(v) Record
2. Occupational Health and Safety
Working condition
(i) Safety Guidance/Instruction to new workers/ workers
(ii) Sufficient drinking water supply
(iii) Enough Resting Place
(vi) Any smoking area
(v) PPE (hard hats, glove, boots, belt, etc.)
Accident
(i)First aid box/kit
(ii) Any accidents & Record
Sanitation
(i)Cleaning of lavatories
Infection
(i)Record
Education and training
(i) Training/ Tool Box meeting/Safety meeting

Items to be checked
(ii) Records of training/meeting
3. Community Health and Safety
(i) Guidance to driver
(ii)Any accidents on road
(iii) Speed limit
4. Other Social Consideration
(i) Construction workers from nearby village (How many)
(ii) Records
5. Emergency Risk
(i) Any Emergency Event (Fire/Earthquake/ Flood)
(ii)Records and Response
(iii) Fire extinguish facilities (extinguisher/tank)
(iv) Evacuation area /Access Road
<ul><li>(v) Other activities</li><li>(Emergency contact no. announcement/ warning sign board)</li></ul>

#### List of Forms

Form No.	Name
FORM-EN1-1	Sample of Cover Letter for Environmental Conservation and Prevention Plan
	(ECPP) Application
FORM-EN1-2	Application Form of Environmental Conservation and Prevention Plan
	(ECPP)
FORM-EN2-1	Sample of Cover Letter for Submission of Draft Initial Environmental
	Examination (IEE) Report and Request for Arrangement of Public Disclosure
FORM-EN2-2	Sample of Cover Letter for Submission of Final Initial Environmental
	Examination (IEE) Report
FORM-EN3-1	Sample of Cover Letter for Submission of Draft Environmental Impact
	Assessment (EIA) Report and Request for Arrangement of Public Disclosure
	and Public Consultation Meeting
FORM-EN3-2	Sample of Cover Letter for Submission of Final Environmental Impact
	Assessment (EIA) Report
FORM-EN4-1	Application for Environmental Inspection for Construction Stage
FORM-EN4-2	Record of Environmental Inspection

#### FORM-EN1-1 Sample of Covering Letter for

#### **Environmental Conservation and Prevention Plan (ECPP) Application**

#### (COMPANY LETTER HEAD)

Date:

Reference No.:

Attention: Chairman, Thilawa Special Economic Zone Management Committee

Dear Sir,

We hereby submit our Environmental Conservation and Prevention Plan in 3 sets (1 original and 2 copies) and 2 CDs for obtaining the Approval of Environmental Conservation and Prevention Plan.

Yours sincerely

Company Seal

Name Title Company Name

**Company Address** 

#### FORM-EN1-2 Application Form of Environmental Conservation and Prevention Plan (ECPP)

Version 3, 22/July/2015

To Chairman Thilawa Special Economic Zone Management Committee

Reference No: Dated:

I hereby apply for the Environmental Permit for the Business planned in the Thilawa Special Economic Zone in accordance with the Notification No. 81/2014 of the Ministry of National Planning and Economic Development by furnishing the particulars as follows:

The Environmental Conservation and Prevention Plan is prepared based on Thilawa SEZ Zone A Industrial Zone International Regulations, EIA Report on Thilawa Zone A Development Project, business description, and condition of surrounding area<sup>1</sup>.

#### A. General Information

A-1: Brief Description of the planned Business

Item	Description
a) Name of Company	
b) Type of Business	
c) International Standard Industrial Classification	
(if any)	
d) Item(s) of Production(s)	
e) Plot number in TSEZ-A	
f) Annual or Daily amount of production (each	
phase and maximum)	
g) Production Area [m <sup>2</sup> ]	
h) Number of employees (each phase and	
maximum)	
i) Production process or description of business	See attached file

#### A-2: Organization and Person in charge for the Environmental Conservation and Prevention Plan

[Operation Stage]

Item	Description
a) Section (or Department) name in charge of	
implementation of ECPP	
b) Person in charge	
c) Tel	
d) E-mail	
e) Organization structure	See attached file

<sup>&</sup>lt;sup>1</sup> EIA Report for Thilawa SEZ Development Project (Zone A) is available on the web site of TSMC (especially, please refer to Chapter 9 (p.209-215)). <u>http://myanmarthilawa.com/sites/default/files/downloads/2014/04/eia.pdf</u>

[Construction Stage]

Item	Description
a) Name of contractor	
b) Section (or Department) name in charge of implementation of ECPP	
c) Person in charge	
d) Tel	
e) E-mail	
f) Organization structure	See attached file

#### **B.** Environmental Conservation and Prevention Plan during Operation

#### **B-1 Air Quality**

<u>B-1.1 Is your company expected to install combustion facilities such as furnace(s),  $engine(s)^2$ , boiler(s), or turbine(s)?</u>

□ Yes	If marked, please fill description of combustion facilities in the below table.
□ No	
□ To be planned	

[Description of Combustion Facility]

Item	Description
a) Type of combustion facility	
b) Number of combustion facility [Unit]	
c) Kind of fuel and its consumption [l/hr as fuel	
oil conversion] (if use fuel)	
d) Kind of material to be used and its hourly	
consumption [ton/hr] (if use material)	
e) Heat transfer area [m <sup>2</sup> ] (if use boiler)	
f) Grate area or tuyere area [m2] (if use melting	
furnace or drying furnace)	
g) Transformer capacity rating [KVA/hr] or	
ampacity [KA] (if use electric furnace)	
h) Capacity of power [MW] (if use electricity)	
i) Other indicators of capacity of combustion	
facility	

#### [Amount of Exhaust Gas]

Item	Volume of Exhaust Gas
Amount of Exhaust Gas (Dry Base)	[Nm <sup>3</sup> /h]
Amount of Exhaust Gas (Wet Base)	[Nm <sup>3</sup> /h]

B-1.2 If your company marked "Yes" on Q B-1.1, please answer the following question.

(1) Do air pollutants, (such as sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NOx), and soot and dust) emitted from combustion facilities comply with the emission standards of international countries, home country, or countries around Myanmar?

<sup>&</sup>lt;sup>2</sup> Not included back-up generator(s).

□ Yes	If marked, please describe emission standards to be applied and its value.					
	(Standard to be applied:	,SO2:	, NOx:	, <i>PM</i> :	, Others:	<u>)</u>
□ Not applicable						
□ To be planned						

ſ	If marked "Yes", please describe reason for justification on marking the above checkbox as
	<u>follows:</u>
	If marked "Not applicable", please describe the reason as follows:

#### **B-2 Water Quality**

B-2.1 Please fill in daily amount of water use and wastewater discharge (maximum) below:

Item	Type of Water	Amount
Daily amount of water use	For industry	m <sup>3</sup> /day
	Others (Canteen, Office, Toilet etc.)	m <sup>3</sup> /day
	Total	m <sup>3</sup> /day
Daily amount of wastewater discharge	From industry	m <sup>3</sup> /day
	Others (Canteen, Office, Toilet etc.)	m <sup>3</sup> /day
	Total	m <sup>3</sup> /day

#### B-2.2 Please mark destination of wastewater discharge from each wastewater source:

1) Industrial wastewater:	□ MJTD WWTP after pre-treatment by own WWTP (Wastewater Treatment Plant)		
	□ MJTD WWTP directly		
	□ Retention canal/Water body after treatment by own WWTP		
	□ No wastewater will be generated		
2) Canteen wastewater:	□ MJTD WWTP after pre-treatment by own WWTP		
	□ MJTD WWTP directly		
	□ Retention canal/Water body after treatment by own WWTP		
	□ No wastewater will be generated		
3) Office wastewater:	MJTD WWTP after pre-treatment by own WWTP		
	□ MJTD WWTP directly		
	□ Retention canal/Water body after treatment by own WWTP		
	□ No wastewater will be generated		

4) Toilet wastewater:	□ MJTD WWTP after pre-treatment by own WWTP
	□ MJTD WWTP directly
	□ Retention canal/Water body after treatment by own WWTP
5) Storm water:	□ MJTD WWTP after pre-treatment by own WWTP
	□ MJTD WWTP directly
	□ Retention canal/Water body after treatment by own WWTP
	□Retention canal/Water body directly

### <u>B-2.3 If your company will install treatment by own WWTP, please attach wastewater quality</u> standard to be applied and process flow of wastewater treatment system.

Type of Wastewater	Item	Description
1) Industrial	Method of wastewater treatment	
wastewater	Target substance/ parameter to be treated by WWTP	
	Process flow chart of WWTP	See attached file
2) Canteen	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file
3) Office	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file
4) Toilet	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file

#### [Reference]

[]	[MJTD Standard of Wastewater quality after Pre-wastewater treatment by the Locator]				
No.	Parameter	TSEZ-A's WQ standard	Unit		
1	BOD5 (5days at 20.°C)	max 200	ppm		
2	Suspended Solids (SS)	max 200	ppm		
3	Total Dissolved solids	max 2,000	ppm		
4	pH Value	6.5-8.5	-		
5	COD <sub>Mn</sub> Permanganate value *Under Review COD <sub>Cr</sub> Dicromate value	max 150 max 300	ppm ppm		
7	Sulphide (as HS)	max 1	ppm		
8	Cyanide (as HCN)	max 0.2	ppm		
9	Oil and grease	max 5	ppm		
10	Total coliform bacteria	max 400	MPN/100ml		
11	Tar	none	-		
12	Formaldehyde	max 1	ppm		
13	Phenols and cresols	max 1	ppm		
14	Free chlorine	max 1	ppm		
15	Zinc	max 5	ppm		
16	Chromium	max 0.5	ppm		
17	Arsenic	max 0.25	ppm		
18	Copper	max 1.0	ppm		
19	Mercury	max 0.005	ppm		
20	Cadmium	max 0.03	ppm		
21	Barium	max 1.0	ppm		

	[MJTD Standard of Wastewater quality after Pre-wastewater treatment by the Locator]				
22	Selenium	max 0.02	ppm		
23	Lead	max 0.2	ppm		
24	Nickel	max 0.2	ppm		
25	Insecticides	None	-		
26	Radioactive Material	None	-		
27	Temperature	max 35	°C		
28	Colour and Odor	150	[Co-Pt]		
29	T-N	40	ppm		

<u>B-2.4 If your company will NOT connect wastewater to MJTD WWTP BUT discharge to water</u> body, please mark target level to be applied as follows. In addition, please attach wastewater quality standard to be applied and process flow of wastewater treatment system:

MOI wastewater guideline		
MOECAF Draft National Environmental Quality (Emission) Guidelines		
□ Other countries       If marked, please attach target level of treated wastewater quality to this form.		
□ International standard	If marked, please attach target level of treated wastewater quality to this form.	
Original	If marked, please attach target level of treated wastewater quality to this form.	

Type of Wastewater	Item	Description
1) Industrial	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file
2) Canteen	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file
3) Office	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file
4) Toilet	Method of wastewater treatment	
wastewater	Process flow chart of WWTP	See attached file

#### **B-3 Solid Waste**

<u>B-3.1 Are non-hazardous wastes from your company properly treated and disposed in accordance</u> with Thilawa SEZ Zone A Industrial Zone International Regulations or your companies policy?

□ Yes

 $\hfill\square$  To be planned

If marked "Yes", Please describe non-hazardous waste management to be applied and estimated yearly/monthly/daily volume of each kind of waste as follows: If marked "Not applicable", please describe the reason as follows: B-3.2 Are hazardous wastes from your company properly treated and disposed in accordance with Thilawa SEZ Zone A Industrial Zone International Regulations or your companies policy?

 $\Box$  Yes  $\Box$  To be planned  $\Box$  Not applicable

If marked "Yes", please describe hazardous waste management to be applied and estimated yearly/ monthly/ daily volume of each kind of waste as follows: If marked "Not applicable", please describe the reason as follows:

**B-4 Soil Contamination** 

B-4.1 Are adequate measures taken to prevent soil contamination by leaked materials, such as raw materials, products, and chemical agents?

 $\Box$  Yes

 $\hfill\square$  To be planned

 $\hfill\square$  Not applicable

*If marked "Yes", please describe soil contamination measures to be applied as follows: If marked "Not applicable", please describe the reason as follows:* 

#### **B-5** Noise and Vibration

B-5.1 Are adequate measures taken to comply with noise and vibration standards of Thilawa SEZ Zone A Industrial Zone International Regulations?

 $\Box$  Yes

 $\Box$  To be planned

□ Not applicable

If marked "Yes", please describe noise and vibration measures to be applied as follows: If marked "Not applicable", please describe the reason as follows: <u>B-5.2 Please describe/ highlight target noise and vibration level to be applied based on Thilawa</u> <u>SEZ Zone A Industrial Zone International Regulations taking into consideration on location of plot</u> and surrounding conditions?

#### [Reference]

	MJTD Environmental Quality Standards for Noise			
				Unit: dB (A)
Category		Day Time (Leq_A) (7am - 7pm)	Evening Time (Leq_A) (7pm - 10pm)	Evening Time (Leq_A) (10pm - 7am)
I. 1	Noise Standard in Construction Phase			
1	A side next to residential house and monastery located less than 150m	75 dB	60 dB	55 dB
2	Other than 1	75 dB	65 dB	65 dB
II.	Noise Standard in Operation Phase			
1	A side next to sensitive area such as monastery, hospital, and school	60 dB	55 dB	50 dB
2	A side next to residential area	65 dB	60 dB	55 dB
3	A side next to commercial and industrial areas including inside of T- SEZ Zone A	70 dB	65 dB	60 dB
Note: Evaluation point is at boundary of locator's property				

#### [Reference]

	MJTD Environmental Quality Standards for Vibration				
	Unit:         Unit:           Category         Day Time (Lv)         Evening Time (Lv)         Evening Time (Lv)           (7am - 7pm)         (7pm - 10pm)         (10pm - 7am)				
1	A side next to residential house and Monastery	65 dB	60 dB	60 dB	
2	A side next to office, commercial facilities, and factories including inside of T-SEZ Zone A	70 dB	65 dB	60 dB	
Note: *1: Evaluation point is at boundary of locator's property Note: *2: Reference acceleration of vibration is 10 <sup>-5</sup> m/s <sup>2</sup>					

#### **B-6 Odor**

<u>B-6.1 Are there any odor sources?</u>

 $\square$  Yes

 $\square$  To be planned

□ Not applicable

<u>B-6.2 If you marked "Yes" or "To be planned" on Q B-6.1, please describe odor control measures</u> to be applied as follows:

If marked "Yes", please describe odor control measures to be applied as follows: If marked "Not applicable", please describe the reason as follows:

#### **B-7 Hazardous and Chemical Substances**

B-7.1 Are there any hazardous substance to be dealt with?

□ Yes

 $\hfill\square$  To be planned

 $\hfill\square$  Not applicable

<u>B-7.2 If you marked "Yes" or "To be planned" on Q B-7.1, please describe hazardous and chemical substances control measures to be applied as follows:</u>

If marked "Yes", please describe hazardous substance control measures to be applied and estimated yearly/ monthly/ daily volume of each kind of hazardous and chemical substance as follows:

If marked "Not applicable", please describe the reason as follows:

#### **B-8 Greening Plan**

B-8.1 Does your company plans to natural environment conservation related to greening (planting trees, vegetation and sodding)?

□ Yes	If marked, please describe area of greening space or number of trees, attach drawing of greening plan etc.()		
□ No			
□ To be planned			

#### **B-9** Landscape

B-9.1 Does your company plans take measures on consideration of landscape such as installation of planting trees, fence, design?

□ Yes	If marked, please describe measures on consideration of landscape such as set back, harmonizing surrounding scenery, mitigation measures on oppressive factors as follows:
□ No	
□To be planned	

If marked "Yes", please describe measures on consideration of landscape as follow: If marked "No", please describe the reason as follows:

#### **B-10 Local Water Use**

B-10.1 Is there a possibility that wastewater and leachates by the project will adversely affect the existing water uses and water area uses?

□ Yes	□ No	$\square$ Not sure

<u>Please describe reason for justification on marking the above checkbox as follows:</u>

#### **B-11 Occupational Health and Safety**

<u>B-11.1 Are adequate measures considered to manage occupational health and safety during operation (e.g., working condition, accident, sanitation, infection, management of hazardous substances, education and training, certification to be applied?</u>

 $\Box$  Yes  $\Box$  No  $\Box$  To be planned

If marked "Yes", please describe expected consideration measures as follows: If marked "No", please describe the reason as follows:

#### **B-12 Community Health and Safety**

B-12.1 Are adequate measures considered to manage community health and safety during operation (e.g., traffic accident on road, intrusion prevention, sanitation, certification to be applied)?

 $\Box Yes \qquad \Box Not required \qquad \Box To be planned$ 

If marked "Yes", please describe expected consideration measures as follows: If marked "Not required", please describe the reason as follows:

#### **B-13 Other Social Considerations**

B-13.1 Does your company plan to social considerations such as contribution to living and livelihood for local community around Thilawa SEZ Industrial Zone, Cooperation Social Responsibility (CSR) activities, and Social Investment.

□ Yes □ No □ To be planned (If marked "Yes", please describe expected considerations as follows:

#### **B-14 Emergency Risks**

<u>B-14.1 Are adequate measures considered to manage emergency risk management during operation (e.g., fire extinguishing facilities, escape gate, flood risk control)?</u>

 $\square \ Yes$ 

□ Not required

 $\square$  To be planned

If marked "Yes", please describe expected consideration measures as follows: If marked "not required", please describe the reason as follows:

#### **B-15 Transboundary or Global issues**

B-15.1 Is there a possibility that the activities of your company includes impacts to transboundary or global issues (e.g., transboundary waste treatment, acid rain, destruction of the ozone layer, and global warming)?

□ Yes □ No □ Not sure

#### C. Environmental Conservation and Prevention Plan during Construction <u>C-1 Pollution Control</u>

<u>C-1.1 Are adequate measures considered to reduce environmental impacts during construction</u> (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?

□ Yes

 $\square$  No

 $\square$  To be planned

If marked "Yes", please describe expected consideration measures as follows: If marked "No", please describe the reason as follows:

#### C-2 Water Usage

C-2.1 Please fill in daily amount of water use (maximum) during construction below:

a) Daily amount of water use (maximum):

m<sup>3</sup>/day

#### **C-3 Occupational Health and Safety**

C-3.1 Are adequate measures considered to manage occupational health and safety during construction (e.g., working condition, accident, sanitation, infection, management of hazardous substances, education and training?

□ Yes □ No □ To be planned

*If marked "Yes", please describe expected consideration measures as follows: If marked "No", please describe the reason as follows:* 

#### C-4 Community Health and Safety

<u>C-4.1 Are adequate measures considered to manage community health and safety during construction (e.g., traffic accident on road, intrusion prevention, sanitation)?</u>

□ Yes □ No □ To be planned *If marked "Yes", please describe expected consideration measures as follows:* 

If marked "No", please describe the reason as follows:

#### **C-5 Other Social Considerations**

C-5.1 Does your company or contractor plans to social considerations such as contribution to living and livelihood for local community around Thilawa SEZ Industrial Zone.

□ Yes □ No □ To be planned

 If marked "Yes", please describe expected considerations as follows:

 If marked "No", please describe the reason as follows:

#### C-6 Emergency Risks

<u>C-6.1 Are adequate measures considered to manage emergency risk management during construction (e.g., fire extinguishing facilities, escape gate, flood risk control)?</u>

 $\square$  Yes

□ Not required

 $\square$  To be planned

*If marked "Yes", please describe expected consideration measures as follows: If marked "No", please describe the reason as follows:* 

#### **D.** Monitoring Plan

#### **D-1 Monitoring Plan in Operation Phase**

D-1.1 Please fill in the below table regarding monitoring plan of each environmental and social element in operation phase

Environmental and Social Element	Monitoring Item	Location	Frequency
B-1 Air Quality			
B-2 Water Quality			
B-3 Solid Waste			
B-4 Soil Contamination			
B-5 Noise and Vibration			
B-6 Odor			
B-7 Hazardous and Chemical Substances			
B-8 Greening Plan			
B-9 Landscape			
B-10 Local Water Use			

Environmental and Social Element	Monitoring Item	Location	Frequency
B-11 Occupational Health and Safety			
B-12 Community Health and Safety			
B-13 Other Social Considerations			
B-14 Emergency Risks			
B-15 Transboundary or Global issues			

Note: If an environmental and social element is not expected to cause adverse impact, please fill "Not expected to cause adverse impact" into monitoring item.

D-1.2 Please fill in frequency of submission of monitoring report to Thilawa SEZ Management Committee:

a) <u>times/year during operation</u> (note: 2 times/year is minimum requirement)

#### **D-2 Monitoring Plan in Construction Phase**

D-2.1 Please fill in the below table regarding monitoring plan of each environmental and social element in construction phase.

Monitoring item	Description	Location	Frequency
C-1 Pollution Control			
C-2 Water Use			
C-3 Occupational Health and Safety			
C-4 Community Health and Safety			
C-5 Other Social Considerations			
C-6 Emergency Risks			

Note: If an environmental and social element is not expected to cause adverse impact, please fill "Not expected to cause adverse impact" into monitoring item.

D-2.2 Please fill in frequency of submission of monitoring report to Thilawa SEZ Management Committee in construction phase

a) <u>times/during construction</u> (note: 2 times/during construction at interim and final is minimum requirement)

Place:

Signature of the Applicant.....

Date:

Name in Block Letters

Title Official Seal/Stamp Tel. No. E-mail Full Residential Address

#### UNDERTAKING

I/We hereby declare that the above statements are true and correct to the best of my/our knowledge and belief. I/We shall abide by prevailing relevant laws and regulation and any other condition that is stipulated by TSMC.

I/We fully understand that any Permission Letter/Approval granted to me/us on the basis of the statement furnished is liable to cancellation or any other action that may be taken having regard to the circumstances of the case if it is found that any of the statements or facts therein are incorrect or false.

I/We hereby declare to strictly comply with provisions of internal regulations provided by the Zone Developer of Zone A of Thilawa Special Economic Zone.

Place:

Date:

Signature of the Applicant Name in Block Letters Title Official Seal/Stamp Tel. No. E-mail Full Residential Address

#### FORM-EN2-1 Sample of Covering Letter for

#### Submission of Draft Initial Environmental Examination

#### (COMPANY LETTER HEAD)

Date:

Reference No .:

Attention: Chairman, Thilawa Special Economic Zone Management Committee

Dear Sir,

We hereby submits our Draft Initial Environmental Examination (IEE) Report in English in 6 copies, Summary of Draft IEE Report in Myanmar in 3 sets (1 original and 2 copies), and in 2 CDs for getting comments of the Draft IEE Report.

In parallel with submission of Draft IEE Report, we requests TSMC to issue an official letter for public disclosure of the Summary of Draft IEE Report for getting comments from public.

Expected date of public disclosure:

Yours sincerely

Company Seal	

Name Title

Company Name

Company Address

#### FORM-EN2-2 Sample of Covering Letter for Submission of

#### **Final Initial Environmental Examination**

#### (COMPANY LETTER HEAD)

Date:

Reference No .:

Attention: Chairman, Thilawa Special Economic Zone Management Committee

Dear Sir,

We hereby submits our Final Initial Environmental Examination (IEE) Report in English in 3 sets (1 original and 2 copies), Summary of Final IEE Report in Myanmar in 3 sets (1 original and 2 copies), and in 2 CDs for obtaining the Approval of Initial Environmental Examination.

Yours sincerely

Name Title Company Name Company Address



#### FORM-EN3-1 Sample of Covering Letter for

#### Submission of Draft Environmental Impact Assessment

#### (COMPANY LETTER HEAD)

Date:

Reference No .:

Attention: Chairman, Thilawa Special Economic Zone Management Committee

Dear Sir,

We hereby submits our Draft Environmental Impact Assessment (EIA) Report in English in 3 sets (1 original and 2 copies), Summary of Draft EIA Report in Myanmar in 3 sets (1 original and 2 copies), and in 2 CDs for getting comments of the Draft EIA Report.

In parallel with submission of Draft EIA Report, we requests TSMC to issue official letters for public disclosure of the Summary of draft EIA Report and public consultation meeting for getting comments from public.

Expected date of public disclosure:

Expected date and time of public consultation meeting:

Yours sincerely

Name

Title

Company Name

**Company Address** 



#### FORM-EN3-2 Sample of Covering Letter for

#### Submission of Final Environmental Impact Assessment

#### **COMPANY LETTER HEAD**

Date:

Reference No .:

Attention: Chairman, Thilawa Special Economic Zone Management Committee

Dear Sir,

We hereby submits our Final Environmental Impact Assessment (EIA) Report in English in 3 sets (1 original and 2 copies), Summary of Final EIA Report in Myanmar in 3 sets (1 original and 2 copies), and in 2 CDs for obtaining the Approval of Environmental Impact Assessment.

Yours sincerely

Name Title Company Name Company Address



## FORM-EN4-1 Application for Environmental Inspection Application for Environmental Inspection

Date:

Attention: Head of Environment Section One Stop Service Center Thilawa Special Economic Zone

We hereby submit "Application for Environmental Inspection in Construction Stage" for Environmental Conservation and Prevention Plan (ECPP) of the following construction project.

1. Project Name:

2. Approval No. of ECPP:

3. Inspection requested: (\*Make a check in appropriate inspection)

□ 1) First Inspection during construction stage

 $\square$  2) Second Inspection during construction stage if construction period is more than one year

4. Estimated Date and Time of Inspection:

# Applicant Signature Name Address

#### FORM-EN4-2 Record of Environmental Inspection

#### **Record of Environmental Inspection**

- 1. Project Name:
- 2. Inspection  $\Box$  First Inspection in construction stage  $\Box$  Second Inspection in construction stage
- 3. Date and Time of Inspection:
- 4. Name of Attendants for Inspection:

	Name	Position
1		
2		
3		
4		
5		

5. Instructions for Inspection:

5.	Instructions for Inspection:	
	Inspection Issues	Instructions

Name of Inspector:

**Environment Section** 

One Stop Service Center

Thilawa Special Economic Zone