

**ENVIRONMENT IMPACT ORDINANCE**  
**(CHAPTER 499)**  
**SECTION 5(1) (b)**  
**APPLICATION FOR PERMISSION TO APPLY DIRECT**  
**FOR ENVIRONMENT PERMIT**

**1. INTRODUCTION**

This Eastman Chemical Factory Complex was built in 1988 and started operation to produce Fine Chemical (Medical drugs used chemical) from 1989 until 2000. Due to the production of this plant of less than 500 tones of product (category less than K.5 project) is not longer economical and also due to space confinement to carryout the expansion to the plant, as a temporary arrangement, the plant has ceased production since December, 2000.

- 1.1 Title of the Project:**  
Eastman Chemical Hong Kong Plant Decommissioning and Dismantlement Project.
- 1.2 Location or Address of the Designated Project:**  
No 1-3 Wang Lok Street, Yuen Long Industrial Estate,  
Yuen Long, N.T, Hong Kong.
- 1.3 Name of Person In-charge and Company for whom the project is or Decommission:**
- a. Wee Hui Lim (Senior Project Manager)  
Hand Phone (852) 61788066 Fax (852) 28699877.
  - b. Eastman Chemical Hong Kong Ltd.  
1-3 Wang Lok Street, Yuen Long Industrial Estate,  
Yuen Long, N.T. Hong Kong.  
Tel: (852) 24737145 or 98328004.
- 1.4 The designated project of belong to:**  
Schedule 2 (Part 11) of the Ordinance that require environmental permits to decommission the Plant.
- 1.5 This application is pursuant to one of the following:**  
Section 5(11) of the Ordinance – The environmental impact of the designated project is unlikely to be adverse and the mitigation measures described in the project profile meet the requirements of the technical memorandum.

## **2. OBJECTIVE AND CONTENT OF DESIGNATED PROJECT REPORT AS ANNEX 1 - OF THE TECHNICAL MEMORANDUM.**

### **2.1 Nature and Scope of the Designated Project:**

Having completed the site survey of the said Plant, it is envisaged that the method to decommission the facility would to some effect resemble the reverse process of the construction of a new plant that is, the construction phase of a plant. The process would start with the civil works, and then the major mechanical equipment would be installed, followed by the support structures, piping works and together with the electrical and instrument works, so for this decommissioning scope of work we shall reverse the flow of works.

The plant location is about 3-4 kilometers from any residential housing areas which shall have no Environmental Impact to the surroundings (As site master plan and plant layout attached at section 4).

Also over the period of 11 (eleven) years of the operation of the plant and with the stringent operation procedures the plant have a very clean records of no spillage or contamination incident, therefore, there are a very unlikely adverse and mitigation impact or issues as regard to Environment Impact or Issues.

The project will be planned and implemented with the consultant, contractor and our in-house resources.

### **2.2 Possible Impact on the Environment.**

As we plan to carryout the dismantlement operation with minimum equipments such as 50-100 tons Crane, excavator and Riggers (working hours 0800 hrs – 1900hrs), Environment impact or issues such as listed below is unlikely to be adverse and mitigation measures described in the project profile shall meet the requirements of the technical memorandum refer to section 5.3 Annex 1 of the Technical Memorandum.

- ? Gaseous emission – As the plant has been shut down since December, 2000 and no longer operational there is no gaseous emission issue to address. Also there shall be no other gases emission during the decommission operation.
- ? Dust – For the dismantle works there will be not likely to have any dusty issue or possibility of very minimal of dust from the existing floor as the plant have been shut down for the past two years.  
Also, the location of this plant is about 3-4 km away from any nearest residential areas therefore, there shall have no dust impact to the surrounding Environment.
- ? Odors – Again as the plant is no longer operational, there shall be no issues of odour exist. Also, even during the dismantlement operation there are no odors emission issues or impact.
- ? Noisy operation – As there are no hacking works related on this job and also the location of this plant is about 3-4 km away from the nearest residential areas, so there are no issue of noise impact to the surrounding Environment.

- ? Night-time operations – As we plan to work on from 0800hrs – 1900hrs, therefore this issue on night-time operation shall not exist at all.
- ? Traffic generation – As above we are planning to work with minimum equipments and work force and all works is limited within the compound of the plant, therefore the issue of traffic generation in this areas is very minimal. The traffic shall consist of 3-4 unit of van for the workers and 1-2 trips of dump truck per week.
- ? Liquid effluents, discharges, or contaminated run-off – As the plant had been flushed and clean up two years ago and is no longer operational, therefore, there are no contaminated effluents, discharges or contaminated run-off from this plant. Also with reference to the Test Report by CMA and Certification Laboratory dated 2000, October 30 carried out *Before* the closed down and flushing of the plant and Also Test Report by CMA and Certification Laboratory dated 2001, January 12 carried out *After* the closed down and flushing of the plant with result Not Detected of Volatile organic carbon existence with reference to regulation USEPA 8260B. There shall be no Liquid effluents or discharges generated during the decommission works because all the piping and tank are been totally flush two years ago.
- ? Generation of waste or by products – As earlier we have spell out that the plant is no longer in operation therefore, the is no issue of non-schedule waste but during the dismantlement of the plant there will be schedule waste about one trip of dumper truck per week such as timbers and waste wrappers papers shall be dispose at the recommendation by Authority or at Authority Approved site.
- ? Manufacture, storage, use, handling, transport, or disposal of dangerous goods, hazardous materials or waste – Also this issue is no longer relevant as the operation of the plant have ceased since December, 2000, therefore, there is no manufacturing, storage, use, handling, transport, or disposal of dangerous goods, hazardous materials but on this issue of schedule waste that we shall only disposed as recommended by the Local Authority.

### **2.3 Major Elements of the surrounding Environment.**

- ? As the site is located in the Industrial Zone, it is about 3-4 km from the residential areas, very far from housing, schools, and hospitals, places of worship, agricultural areas and sites of cultural heritage.

### **2.4 Further Environment Implications Consideration.**

- ? All schedule waste shall be only disposed at location approved by the authorities and code of practice as spell out in the works method is enhance and monitored.

### **3. SCOPE OF WORKS**

- 3.1 To dismantle all plants, equipments and utilities installations, including storage tanks (aboveground and underground) structural steel supports and pipe racks erected at the said premises.
- 3.2 The office building, with essential services such as fire-fighting system, lift, office ceiling, air-conditioned system, water and electricity, factory building and warehouses shall remain as they are.
- 3.3 Some equipment need to be dismantled and tagged for reassemble, packed to seaworthy and containerized to destinations as advised. Special care need to be exercised for sophisticated equipments and breakables so that they are not damaged during transportation. Dismantled equipments not required for delivery to other destination are to be stacked and stored in an orderly manner at the warehouse for possible sales locally.
- 3.4 It is vital that the nozzles, flanges and any connection points of the equipment are protected from possible damage during dismantlement.
- 3.5 All scrapped materials and rubbish generated shall be removed and carted away for proper disposal. Scrapped metal that capture values are to be collected, stock-pile and dispose off by sales to be advised by Employer.
- 3.6 In addition to the above, the contractor is expected to:-
- 3.7 Carry out all works on site in compliance to all Rules and Regulations imposed by relevant Government Authorities in Hong Kong.
- 3.8 Comply with all safety rules and regulations imposed by Hong Kong Authority and to Eastman Chemical's Policy and Safety.
- 3.9 Mobilize to site within two weeks on receiving instructions to do so.
- 3.10 Lease and obtain necessary clearances and approvals from relevant Government Authorities in Hong Kong on behalf of Eastman Chemical before commencement of the Works.
- 3.11 Dismantle all piping and fittings for possible re-use in orderly and proper manner. Dismantle all electrical cables, wiring and cable trays. Special care must be observed on instrumentation connection panels and controls to the equipment during dismantlement.
- 3.12 Demobilization and completely clear of all rubbish from site and cart away to EPD Hong Kong Approved dump site.

#### **4 SITE AREA**

Estimated Space Area is about 9959.030 meter square.  
(As per attached Master Layout Plan Yard-IC-001)

#### **5 TENTATIVE WORK SCHEDULE OF DISMANTLING WORKS.**

**15<sup>th</sup> July, 2002 – 31<sup>th</sup> August, 2002**

##### **Stage One**

**To obtain the Hong Kong authority (EPD) Environment Permit prior to starting of works.**

**31<sup>th</sup> August – 16<sup>th</sup> September, 2002**

##### **Stage Two (External Works)**

1. To dismantle Dangerous Goods Store Category 3,4,5,6,7 & Category 2
2. To dismantle Transformer room, generator room, switch room, workshop & Replacement material store.
3. To dismantle All the pipe Bridge
4. To dismantle All underground solvent tanks.

*Note: Hydrogen Storage building (No:14) demobilization to be advise by Eastman*

##### **(Process Building Works)**

**Stage Three** - Process Building central Piping & Rack system dismantling.

**Ground Level** - Dismantle pipe rack, PE duct & Utilities/Process piping and the changing room platform.

**Level Three** - Dismantle secondary platforms, pumps, heat exchanger and piping systems and PE ducting.

**Level Four** - Dismantle piping system, PE duct and pipe rack (center ONLY).

**Note: On 16<sup>th</sup> Sept, - 17<sup>th</sup> Sept, 2002 (Housekeeping ready for auction day 18<sup>th</sup> Sept, 2002).**

**18<sup>th</sup> September, 2002. Equipments Auction Day. (NO Work on Site)**

**Stage Four (Resume work on 19<sup>th</sup> Sept, 2002 – 30<sup>th</sup> November, 2002).**

**External Works** – Dismantle of boiler system, water treatment system, Distillation plant, Acid and Leach tanks and Standby Generator.

**(Process Building Works)**

**Ground Floor** – Dismantle dryer (2 no), Clean room boot and Oven dryer.

**Level Three** – Dismantle Clean room boot (2 No), Centrifugal drums (3 No), piping system and glass tubing.

**Level Four** – Dismantle Glass Lined reactors, piping systems, glass tubing, heat exchangers and clean room boot.

**Level six (Roof Top)** – Dismantle cooling tower, boilers and heat exchanger system, chiller compressor, air compressor, tankage, pumps and piping system.

**Demobilization on the 30<sup>th</sup> November, 2002.**

**Note: To obtain Clearance from Eastman (Rep) before starting of any works.**

## **6 WORK METHOD STATEMENT**

### **6.1 ELECTRICAL/INSTRUMENTATION DISCONNECTION**

- 6.1.1 To prepare for All necessary safety PPE, tools, equipments and etc, before work started.
- 6.1.2 To Check that the building is vacated and NO one is using any appliance and equipments that require power supply, make sure all computers, ups and other equipments related to computers are switch off.
- 6.1.3 To trace out the cable route that is connected to the designated point, in this case the Control Center. The cable route shall refer to the “As Built” schematic drawing hanging at the wall of the Electrical Charge man office.
- 6.1.4 MUST wear appropriate apparatus such as rubber safety boot and goggle if necessary.
- 6.1.5 Make Sure the floor of the Main Switchboard is with rubber matt.
- 6.1.6 ONLY the Approved Charge Man is allowed to carry this Works.
- 6.1.7 Switch all the incoming breakers at Main Switchboard.
- 6.1.8 Then Switch off the MCCB in the Main Switchboard (Remember to disconnect the neutral link as well).
- 6.1.9 To ensure No current flowing through the Main Switchboard’s busbar and sub-main cable and the earth cable or tape all any other metal parts.
- 6.1.10 To disconnect all the Plant-process sub-main cabling from Module Case Circuit Breaker (MCCB).
- 6.1.11 Switch on the power to the Administration Building.
- 6.1.12 To dismantle all other necessary accessories such as trucking, cables trays and etc.

### **6.2 MECHANICAL DISMANTLING.**

- 6.2.1 The dismantling process will be according to plant areas.
- 6.2.2 All tanks and piping shall be vented before any hot work commenced.
- 6.2.3 At each area, the dismantling of the pipe racks (external only) will begin with the dismantling of the roof sheets and some minor bracings to enhance the removal of cut pipes.
- 6.2.4 After which the remaining piping will be oxy-cut in length 4-6 meter or manageable lengths, lowered safely to the ground using the crane and stacked properly.
- 6.2.5 Rotary equipments will be removed and salvaged after they have been detached for Auction sale.
- 6.2.6 All the shelving in Area 3 will be dismantle to allow for equipments storage and crating.
- 6.2.7 Scissor lift shall be used for works in elevated areas and personnel must wear safety harness for work more that 2 meter high.

- 6.2.8 To dismantle the boiler room will begin with the dismantling of all related piping works and followed by removal all related equipments and the boiler.
- 6.2.9 Glass ware and piping in the process building will be identified and tag before removal for storage and packing.
- 6.2.10 All railing and platform attached to the tank shall be removed before lifting of the tanks.
- 6.2.11 Bolted tanks shall be unbolted and lifted up using the crane for removal.
- 6.2.12 Distillation unit structure shall be tag as per as built drawing before dismantling taking place. The related structure shall be removed from the top down.
- 6.2.13 Scrubber shall be removed starting by removing the duct works and from the top down.
- 6.2.14 The dismantling of cooling tower, chiller, flue stack and reactor required the 100 ton crane after all the related piping and equipments have been detached.
- 6.2.15 Reactors piping and instrument component shall be dismantle before lifting the glass lined reactors.
- 6.2.16 The reactors body shall be rolled out to the lifting bay by using the forklifts and transferred to the ground using the 100 ton crane.
- 6.2.17 The excavator shall be employed to demolish the bund wall.
- 6.2.18 Excavator complete with hydraulic breaker will be used for addressing to the underground tanks before lifting by crane.
- 6.2.19 The ground hole shall be made good.

## **7. PACKING**

- 7.1 Salvaged items will be loaded into containers or transporting skid for shipping to their Final destination.
- 7.2 Where necessary, seaworthy grade packing shall be employed.
- 7.3 All items shall be clearly tagged in accordance to their respective packing lists.

## **8 SAFETY**

- 8.1 Personnel involved in the works shall be properly equipped with the necessary PPE and brief on the safety procedure of the work site as required by the Hong Kong authority and Client requirements.
- 8.2 Any cutting works shall not commence without all necessary hot work permit approved by the safety officer and the project manager.
- 8.3 No personnel shall enter the confine space areas without the confine space entry permit approved by the safety officer and project manager.
- 8.4 All lifting activity shall only be done during the day light (before 1900hrs).
- 8.5 All heavy lift shall have the lifting plan approved by project manager before lifting commence.



## **9 SITE APPRAISAL CHECKLIST**

### **Annex A**

#### **PRELIMINARY SITE APPRAISAL CHECKLIST**

Name of Company: Eastman Chemical Hong Kong Ltd  
Site Address: 1-3 Wang Lok Street, Yuen Long Industrial Estate,  
Yuen Long, N. T. Hong Kong.  
Date: 27/7/02

#### **Checklist for the site Appraisal:**

- 1 What is your company's main current activities/  
Operations in the above address?  
***Plant Closed Operation Dec, 2000. (No Activities/Operations)***
- 2 Area of your site?  
***Estimated Area is 9959.03 Square Meter***
- 3 Length of operation?  
***1989 until Dec, 2000. (Estimated 11 Years)***
- 4 Do you know the type of land use before you took  
Over the site?  
**Newly Constructed Industrial Land**
- 5 Have you ever received any notices of violation of environmental regulation or  
Public complaints?  
**NO**
- 6 Do you have regular check for spillage and monitoring of chemical handled?  
**YES (There is a Daily sampling monitoring system complete with  
laboratory and a very stringent operation policy)**
- 7 Did any tank/truck spillage or leakage happen in your site?  
**NO**
- 8 Do you have any registered hazardous installations as defined under relevant  
Ordinance?  
**YES (There was Licenses No. 18295, 16627 to 16638 and 16644 to 16656 by  
Fire Services Licensing & Certification Command Dangerous Goods  
Department had been cancel/not renewed by June 5, 2002).**
- 9 Do you have underground storage tank?  
**YES (All the 12 no u/g tanks are encased in the concrete with  
minimum cover of 150mm)**
- 10 Do you have any records of major renovation of your site or rearrangement  
Of underground utilities, pipe work/underground tanks?  
**NO Renovation Works**

## **10 CONCLUSION.**

With references to the materials data sheet on the chemical used on the plant, that is, none of the chemical is of volatile organic carbon materials. The chemical used in this plant is mostly are of solvent nature which are easily solvable and diluted by water and with the water treatment plant system in place shall not have any adverse or issues effecting to the Environment.

Also with the plant clean Records History of Non spillage or Non contamination occurrence shall enhance further the issue of non-Environment impact.

Therefore, the environment impact of the designated project is unlikely to be adverse and the mitigation measures described project profile meet the requirements specified under section 5.3 Annex 1 of the technical memorandum.