

## **FOREWORD**

**Many construction sites are located near to residential and built-up areas. To ensure that residents in the neighbourhood are not unduly inconvenienced or subjected to nuisances or public health hazards, contractors and site managers will have to pay greater attention to environmental health issues that may arise from their worksites.**

**To help contractors and site managers identify these problems before they develop, the National Environment Agency launched the Environmental Control Officers (ECO) Scheme. Under the ECO scheme, suitably qualified personnel were trained on environmental management, including areas such as vector control, noise control, food hygiene and waste management.**

**This Code of Practice for Environmental Control Officers spells out the role of the ECOs, their responsibilities and what is expected from them.**

**Director-General of Public Health  
National Environment Agency  
Singapore**

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# **CODE OF PRACTICE FOR ENVIRONMENTAL CONTROL OFFICERS**

## **1. Introduction**

- 1.1 This Code of Practice is intended to guide Environmental Control Officers and contractors in carrying out works on their construction sites in compliance with the Environmental Public Health (Registration of Environmental Control Officers) Regulations 1999.

## **2. Definitions**

- 2.1 In this Code, unless otherwise specified:-

- 2.1.1 “works”, in relation to a construction site, means-

- (a) the erection, construction, alteration, repair or maintenance of buildings, structures or roads;
- (b) the breaking up or opening of, or boring under, any road or adjacent land in connection with the construction, inspection, maintenance or removal of works;
- (c) demolition or dredging works; or
- (d) any other work of engineering construction.

- 2.1.2 “Full-time Environmental Control Officer” means an Environmental Control Officer employed on a full-time basis in the construction site for which he is employed for at least 40 hours per week.

- 2.1.3 “Part-time Environmental Control Officer” means an Environmental Control Officer employed on a part-time basis in the construction site for which he is employed for at least 15 hours per week.

- 2.1.4 “Contract sum”, in relation to a construction site, means the total value of the works to be carried out on the construction site as stated in the applicable contract.

### 3 Construction sites requiring Environmental Control Officer (ECO)

Construction sites are required to employ either a part-time or full-time ECO depending on the contract sum of the construction works as shown in the table below:

<b>Contract sum of Construction works</b>	<b>Type of ECO required</b>
\$10 million & below	Not required
Exceed \$10 million but not exceeding \$50 million	Part-time ECO
Exceed \$50 million	Full-time ECO

### 4 Registration of ECO

4.1 A person with the requisite qualifications must successfully complete a training course and pass the exam for ECOs before he can be registered as an ECO.

4.2 For registration, the ECO must submit a formal application form, together with a passport-size photograph and a cheque of \$120/- made payable to 'National Environment Agency' according to the format in Appendix 1, as required under the Environmental Public Health (Registration of Environmental Control Officers) Regulations 1999 to The Director-General of Public Health at

Environmental Health Department  
National Environment Agency  
40 Scotts Road  
#21-00  
Singapore 228231

4.3 An application fee of \$120 is payable and a Certificate of Registration (Appendix 2) together with an ECO Registration card (Appendix 3) valid for 2 years will be issued upon successful application.

4.4 It is an offence for the occupier of a construction site to employ an ECO who is not registered or does not have a valid Certificate of Registration. Likewise, it is an offence for an ECO to work in a construction site if he is not registered with the National Environment Agency or does not possess a valid Certificate of Registration.

4.5 ECOs when performing their duties on the construction sites are required to carry their Environmental Control Officer Registration Card.

4.6 The registration for an ECO may be renewed upon its expiry. A fee of \$120 is payable for renewal of registration valid for two years.

## **5. Role of ECO**

5.1 The role of an ECO is to advise the occupier of the construction site on what needs to be done.

5.2 The ECO shall look out for conditions/ situations in construction site which causes environmental health problems or are likely to cause environmental health problems. He should report these conditions/ situations to the occupier of the construction site together with recommendations on remedial measures to be taken to prevent recurrence. The main areas where the ECO should pay attention to are:

- i) disease-bearing insects and rodents;
- ii) proper disposal of construction waste/ marine clay;
- iii) noise, air and water pollution;
- iv) earth littering;
- v) siltation of drains;
- vi) food hygiene in canteens;
- vii) proper maintenance of septic tank(s)/ holding tank(s), chemical/ portable toilet(s) and other sanitary facilities; and
- viii) any other environmental health matters.

5.3 The ECO shall carry out the following duties on environmental control at the construction site:

- (a) Prepare and submit a Site Environmental Control Programme in accordance to the format in Appendix 4 to the occupier of the construction site at least three weeks before work commences on the worksite (Note: Please refer to 6.1 (a) on deadline for the occupier to submit the Site Environmental Control Programme to the Director-General of Public Health);
- (b) Inspect the construction site to ensure all facilities and equipment relevant to the maintenance of environmental health are in proper working condition and do not pose any environmental health hazard;
- (c) Point out and discuss environmental health irregularities such as mosquito and fly breeding, rodent infestation, noise/ dust/ smoke/ water pollution, poor housekeeping, earth littering, poor refuse management, poor maintenance of sanitary facilities, etc. with the occupier of the construction site and recommend measures to rectify such irregularities;

- (d) Attend to all feedback on such irregularities and inform the occupier of the construction site accordingly;
- (e) Report and submit a Site Environmental Control Report in accordance to the format in Appendix 5 to the occupier of the construction site once every fortnight, on the 1<sup>st</sup> and 15<sup>th</sup> of the month;
- (f) Assist the authorities to investigate outbreaks of infectious, vector-borne or food-borne diseases on the construction site; and
- (g) Organise campaigns, training courses and other activities to develop and sustain the interest of workers in maintaining good environmental health standards in the construction site.

## **6. Responsibilities of Occupier of Construction Site**

- 6.1 The occupier of the construction site shall take and follow the advice given by the ECO in maintaining good environmental health standards at the construction site. The occupier is responsible for all irregularities and violations in his work site and shall carry out the following duties:
- (a) Submit the Site Environmental Control Programme prepared by the ECO to the Director-General of Public Health at least two weeks before work commences on the construction site;
  - (b) Carry out the works recommended by the ECO in the Site Environmental Control Programme;
  - (c) Notify the Director-General of Public Health on the employment of ECO on the construction site according to the format in Appendix 6;
  - (d) Discuss the Site Environment Control Report with the ECO within one week on receipt of the report and implement the recommendations made by the ECO;
  - (e) Countersign and stamp the Site Environmental Control Report submitted by the ECO;
  - (f) Keep the Site Environmental Control Report available for inspection by the Director-General of Public Health or Public Health Officers when required;
  - (g) Submit the Site Environmental Control Report to the Director-General of Public Health as and when required to do so by the Director-General;

- (h) Facilitate the work of the ECO by providing the necessary resources including facilities, equipment and information necessary to enable the ECO to carry out his work effectively and efficiently on the construction site;
- (i) Ensure continued education of workers on environmental health issues;
- (j) Release ECO to attend courses, seminars, conferences as and when required by the Director-General and to reimburse them as required under the law;
- (k) Require any person employed on the construction site to observe good environmental health practices;
- (l) Notify the Director-General of Public Health in writing within 14 days of termination of employment of ECO;
- (m) Employ another ECO within 14 days upon termination of employment, suspension or cancellation of registration of the ECO employed for the construction site; and
- (n) Employ a temporary ECO for the construction site when the current ECO working on the construction site is on leave or absent for more than 5 days.

## **7 Submission of reports**

### **7.1 Site Environmental Control Programme**

In order to forestall the occurrence of potential environmental health hazards, every construction site is required to draw up a Site Environmental Control Programme before work commences on the construction site. The ECO shall prepare and submit the Site Environmental Control Programme in accordance to the format in Appendix 4 to the occupier of the construction site who in turn shall forward a copy to the Director-General before work commences on the site.

The Site Environmental Control Programme contains recommendations on measures to prevent poor refuse management, noise and dust pollution, control of vectors and requires the submission of layout plans on drainage works, designated areas for storage of organic and construction wastes and all temporary site structures, such as canteens, toilet facilities and workers' quarters.

## 7.2 Site Environmental Control Report

The ECO is also required to submit a Site Environmental Control Report to the occupier of the construction site once every 2 weeks. Among other things, the report will contain irregularities detected by the ECO and recommendations on remedial measures to be taken by the occupier. It will also record training courses and activities held to promote environmental health on the site and investigation into feedback and outbreaks of vector-borne, food-borne and infectious diseases, etc. A standard format of the report can be found in Appendix 5. The report shall be made available for inspection on demand by the Director-General of Public Health or any Public Health Officer.

## 8. **Guide on good practices on construction sites**

To facilitate ECOs and occupiers in ensuring good practices are observed in construction sites, the main areas to be addressed and requirements to be met are given below. Occupiers of construction sites, as well as the ECOs, should adhere to these requirements so that their construction sites are kept free from environmental health hazards at all times.

### 8.1 Earth littering

- 8.1.1 Lorries should not be overloaded while transporting earth, debris, etc. as this may lead to spillage and littering of roads.
- 8.1.2 All vehicles carrying refuse, sand, earth, gravel, clay, stone, or any other similar material must be completely and adequately covered as stipulated in Environmental Public Health (Public Cleansing) Regulations 14(2) and Road Traffic Rules 18, before they leave the construction site.
- 8.1.3 A paved wash bay is to be provided for washing of vehicles (e.g. lorry tyres and undercarriages) before they leave the worksite. All washings from the wash bay should be channelled to a silt trap.

### 8.2 Siltation of drains

- 8.2.1 A system of silt control measures including temporary perimeter lined cut-off drains, silt fences and silt traps is to be provided within the worksite before commencement of any earthworks or construction works to prevent the wash down of silt, earth, and debris from the worksite into the public drains and adjacent premises.



- 8.2.2 Water run-off from the worksite is to be channelled through the silt fences into silt traps and is not to be discharged directly into the public drains.
  - 8.2.3 Silt control facilities including the temporary perimeter lined cut-off drains, silt fences and silt traps are to be maintained and desilted regularly.
  - 8.2.4 Earth surfaces or slopes adjacent to any drain shall be closed turfed, paved or covered.
  - 8.2.5 Adequate measures shall be taken to prevent any earth, sand, top-soil, cement, concrete, debris or any other material to fall or be washed into the drains from any stockpile thereof.
  - 8.2.6 Drains in the vicinity of the worksite shall not be silted or obstructed due to the construction works.
- 8.3 Air pollution and dust nuisance
- 8.3.1 Open burning of construction and other wastes are not allowed at the worksite as this is an offence under the Environmental Pollution Control Act.
  - 8.3.2 Effective measures should be taken to minimise dust pollution caused by construction works, e.g. water spray, shielding, etc.
  - 8.3.3 All construction debris should be properly stored and removed for disposal quickly. They should not be left to accumulate at the site.
  - 8.3.4 Debris chutes to transfer construction debris efficiently from higher floors to the ground floor should be provided to prevent dust nuisance.
  - 8.3.5 Construction sites with concrete batching plants must have a licence from the Head, Pollution Control Department to operate as a Scheduled Premise. The contractor licensed to operate the concrete batching plant must comply with all the conditions stipulated by the Director.
  - 8.3.6 All construction equipment and machinery must be well maintained and should not emit dark smoke.

## 8.4 Toilet facilities

- 8.4.1 All toilet facilities are to be connected to sewer or holding tank/ temporary septic tank approved by the Sewerage Department, Public Utilities Board. Where septic tank(s)/ holding tank(s) and/ or chemical/ portable toilet(s) are provided, they are to be regularly maintained. There should be no discharge of wastewater from the holding tank into the watercourse or controlled watercourse.
- 8.4.2 Ensure good drainage is provided for all temporary structures and connect drains to a proper outlet to prevent water ponding in the toilet facilities.
- 8.4.3 Toilets must be provided with toilet amenities such as toilet paper, soap, litter bins and hand dryer and be kept clean at all times. They must not be used for storage purpose.
- 8.4.4 Proper sanitary facilities should be provided at the worksite and discharge points to be connected to septic tanks for disposal.

## 8.5 Solid Waste Management

- 8.5.1 The contractor shall engage a licensed waste collector for collection and removal/ disposal of waste generated. A system to ensure that all wastes are properly disposed at authorised sites should be implemented.
- 8.5.2 The occupier of the construction site shall provide sufficient refuse bins to contain the refuse. Every bin shall be provided with a tight and securely fitting cover or lid. The bins shall be of a shape, size and design as may be approved by the Director-General of Public Health from time to time.
- 8.5.3 Separate bins should be used to store construction wastes/ debris and organic food waste. All bins should be properly covered when not in use.
- 8.5.4 The number of refuse bins provided must be adequate. There should be no spillage of refuse around the bins at any time.
- 8.5.5 All food waste should be contained in plastic bags before disposal into bins. They should be removed daily to prevent fly and smell nuisance.
- 8.5.6 Construction wastes/ debris should be stored in skips placed at a location easily accessible to waste removal vehicles.

## 8.6 Noise Control

8.6.1 Advise the contractor to reduce noise generated at the worksites by taking the following measures:

- (a) use advanced construction and noise damping technology;
- (b) restrict noisier activities like piling, concreting and demolition to day-time;
- (c) use pre-cast concrete panels;
- (d) use visual screens and safety nets to help reduce the noise generated;
- (e) keep residents informed of impending noisy construction works, especially at night. Wherever possible, avoid noisy activities late at night, Sundays and public holidays;
- (f) use electricity supply from PUB Power Grid instead of generators where possible. If generators are used, they should be of the silent type and be sited away from residential areas; and
- (g) maintain and service equipment and machinery regularly to reduce noise emission.

8.6.2 Make arrangements to set up a monitoring station to carry out noise level readings over a period of 12 hours and 5 minutes in decibels (A). The acceptable noise level is as follows:

Type of building affected	Maximum noise level permitted (dBA)		Maximum noise level permitted (dBA)	
	7am – 7 pm		7pm – 7am	
	Over 5 min (*Leq 5)	Over 12 hours (*Leq 12)	Over 5 min (Leq 5)	Over 12 hours (Leq 12)
Hospitals, schools, institutions of higher learning, homes for the aged sick, etc	75	60	55	50
Buildings other than the above	90	75	70	65

\* Leq 5 min and Leq 12 hours is the equivalent continuous noise levels over a period of 5 minutes and 12 hours respectively.

8.6.3 Records on noise levels from construction sites should be properly kept and produce the records when requested.

8.6.4 The use of diesel piling machines is prohibited in worksites located within the urban city and within 200m of any school, hospital, or residential estates.

## 8.7 Vector Control

- 8.7.1 The contractor shall engage a competent Pest Control Company from the start of the project. The list of pest control companies registered with CIDB and NEA is available from the Environmental Health Department, National Environment Agency
- 8.7.2 The pest control company should submit a vector control programme and all vector control service reports to the Environmental Health Department, National Environment Agency.
- 8.7.3 Regular checks of at least once a week should be conducted on the construction site for mosquito breeding in the following areas in the worksites, bangsals and site offices:
- (a) discarded receptacles and building wastes;
  - (b) building materials, canvas sheets, equipment and machinery;
  - (c) puddles on the ground;
  - (d) puddles on the concrete floors of all upper levels;
  - (e) water storage drums, tanks and containers;
  - (f) bulk waste containers;
  - (g) trenches;
  - (h) lift wells;
  - (i) drains or channels temporarily constructed to drain off water;
  - (j) air handling units, cooling towers, window unit air conditioners; and
  - (k) flat roofs of bangsals and temporary office.
- 8.7.4 Empty receptacles, pails, basins, and other containers, equipment or machinery should be kept indoors.
- 8.7.5 Worksite should be kept free of litter at all times. Construction wastes should be promptly disposed into bulk waste containers and the containers should be emptied daily.
- 8.7.6 Building materials should be stored under shelter as far as possible. They should always be stored at least 60 cm above the ground to allow water collected below to be treated by pest control operators.
- 8.7.7 Air-handling units (AHU) should be stored under shelter. Otherwise, the overflow pipe should be uncapped to allow rain water collected to drain out.
- 8.7.8 Stagnant water should be pumped out and ground depressions should be covered with earth.

- 8.7.9 Sand granular insecticide should be applied into water collected in perforated bricks. Exposed brick holes should be sealed up with cement.
- 8.7.10 Anti-mosquito oil and insecticides such as temephos and pirimiphos-methyl should be applied into stagnant water at least once a week. The application should be repeated after rain as the oil and insecticides would be washed away by the rain.
- 8.7.11 Thermal fogging should be carried out with a suitable insecticide such as pirimiphos-methyl or malathion at least once a week. Fogging should be carried out every day for a week when the adult population is high, and when there are dengue outbreaks near the construction site.
- 8.7.12 If the site is situated in a malaria-sensitive area, the pest control operator should carry out residual-spraying of all inner and outer walls of bangsals and site offices once a month.

#### Measures to prevent Fly and Rodent Infestation

- 8.7.13 Worksite should be kept litter-free at all times and refuse bins covered tightly at all times.
- 8.7.14 Food provisions should be stored in rodent-proof rooms or cabinets.
- 8.7.15 All food items should be adequately covered and stored at least 60cm above the ground.
- 8.7.16 Contractor or the pest control operator should check for rodent burrows every week. Active burrows should be treated with rodenticides for 3 consecutive days or until the rats are all dead (i.e. no more dead rats found), and then sealed with compacted earth.
- 8.7.17 Should sludge be used for landscaping, the sludge should be covered with a layer of topsoil at least 5 cm thick to prevent breeding of flies.

#### Measures to prevent Infectious Disease

##### Malaria

- 8.7.18 Contractor should maintain records of all employees working on the construction site. All foreign workers and food handlers should be screened for history of malaria and taken blood films to exclude parasite carriers.

- 8.7.19 Follow up one month after discharge (for *P. falciparum* infection) and every month for six months after discharge (for *P. vivax* infection).

#### Dengue fever/ Dengue Haemorrhagic fever

- 8.7.20 Conduct regular checks for larval survey and source reduction. (see Para. 7 Vector Control)

### 8.8 Prevention of Water Pollution

- 8.8.1 All wastewater generated at the construction site must be properly treated and disposed. No discharge of sewage or other untreated wastewater into drain or land is allowed.

- 8.8.2 Oil and chemical in drums, carboys, containers, etc shall be stored in a designated storage area within a building or covered shed with concrete floors and facilities to contain any leak or spillage.

- 8.8.3 A full containment bundwall should be provided for bulk storage oil tanks, including skid tanks. A collection sump should be provided to collect any spillage. All leaks and spillages in the storage area or construction site shall be collected and sent to a licensed toxic waste collector for proper disposal.

- 8.8.4 Any repair or servicing of vehicle which requires waste oil to be disposed of should only be carried out if there are facilities to contain the waste oil.

- 8.8.5 Soil treatment is to be carried out only by trained operators of registered pest control companies. The operators shall comply fully with the water pollution control requirements for the use of termiticides in anti-termite soil treatment issued to the companies by Pollution Control Department.

### 8.9 Food Hygiene

- 8.9.1 Food handler operating on the construction site must be registered with the National Environment Agency as a licensed operator and he complies with all licensing requirements. All food handlers should be educated on food and personal hygiene, vaccinated against typhoid and have attended the basic food hygiene course.

- 8.9.2 Food sold on the worksite should be prepared within the premises or obtained from licensed sources.

- 8.9.3 All liquid food wastes must be drained into the sewerage system and not into open drains.

#### Food handling and storage

- 8.9.4 All ready-to-eat cooked food must be handled with tongs or other suitable equipment. Food handlers are required to wear gloves while handling cooked or ready-to-eat food.
- 8.9.5 Food must not be prepared or stored in or near toilets or on the floor.
- 8.9.6 All refrigerators/freezers chillers must be provided with temperature gauges, and the compartments must be maintained at the following temperatures for the types of food:

<u>Type of food</u>	<u>Temperature not above</u>
Frozen meat/fish	- 12 °C
Ice-cream	- 2 °C
Chilled meat/fish	+ 4 °C
Dairy products	+ 7 °C

- 8.9.7 Food products or food ingredients once removed from their packaging must be kept in clean containers and stored in refrigerators or food cabinets, whichever is appropriate.
- 8.9.8 Food displayed for sale must be adequately covered and protected.

#### Personal hygiene

- 8.9.9 Food handlers must not place their fingers to the mouth, eye, ear, nose or scalp when preparing food; they must also not eat, chew, smoke, spit, cough, sneeze or comb their hair when handling food.
- 8.9.10 Food handlers must wash their hands thoroughly and frequently before and after preparing food and after visiting the toilets. This is necessary even when the food handler wears gloves.
- 8.9.11 Food handlers must protect any open wound or lesion on their hands with waterproof dressings.

## Equipment

- 8.9.12 All equipment, crockery and utensils must be kept clean and well-maintained at all times. Defective equipment/ utensils/ crockery with chips and cracks should not be used.
  - 8.9.13 The chopping board, tongs, scoop, fork, gloves or other utensils used for handling raw food should not be reused to handle cooked food.
  - 8.9.14 Exhaust fans and grease filters should be serviced regularly to ensure they are in good working condition. Cooking hoods should be free from oil drips.
- 8.10 Building requirements
- 8.10.1 If cooking is carried out, there should be a hood connected to a flue discharge above roof level.
  - 8.10.2 Potable water should be provided and wash area and sinks connected to the sewerage system.
  - 8.10.3 Adequate wash hand basins should be provided in the kitchen and other work areas.

## **9. Penalties**

- 9.1 Under the Environmental Public Health Act, it is an offence for the ECO or occupier of the construction site to contravene or fail to comply with any of the regulations stated in the law. The list of penalties to be imposed on the ECO or the occupier of the construction site and other environmental health hazards is tabulated in Appendix 7.



**THE ENVIRONMENTAL PUBLIC HEALTH ACT  
(CHAPTER 95)**

**APPLICATION FOR REGISTRATION AS AN  
ENVIRONMENTAL CONTROL OFFICER**

**UNDER THE ENVIRONMENTAL PUBLIC HEALTH  
(REGISTRATION OF ENVIRONMENTAL CONTROL OFFICERS)  
REGULATIONS 1999**

I) General Particulars

Name (in BLOCK LETTERS)		Sex: Male / Female
Home Address		
Office Address		
Citizenship	NRIC No./FIN No.	Pager/Handphone No.
Place of Birth	Home Tel No.	Environmental Control Officer Training Course Certificate No. & Date
Date of Birth	Office Tel No.	Safety Officer Registration No.*

\* Please indicate N.A. if not applicable

II) Education (copy of Certificates to be attached)

Highest Education achieved:

Name of Institution	Year		Field of Study	Highest Qualification Obtained
	From	To		

P.T.O.

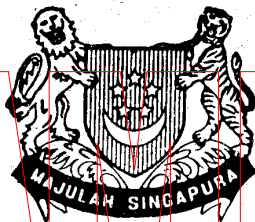
III) Current Employment

Company's name And registered address	Years of service (to-date)	Designation

I hereby certify that the above particulars are true and correct to the best of my knowledge. I also enclose a passport-size photograph and a cheque of S\$120/- made payable to 'National Environment Agency'.

\_\_\_\_\_

Signature of Applicant & Date



**SAMPLE**

**NATIONAL ENVIRONMENT AGENCY**

**THE ENVIRONMENTAL PUBLIC HEALTH ACT  
(CHAPTER 95)**

**THE ENVIRONMENTAL PUBLIC HEALTH  
(REGISTRATION OF ENVIRONMENTAL CONTROL OFFICERS)  
REGULATIONS 1999**

**CERTIFICATE OF REGISTRATION  
FOR ENVIRONMENTAL CONTROL OFFICERS**

This is to certify that

\_\_\_\_\_

has been registered by  
The Director-General of Public Health under  
The Environmental Public Health  
(Registration of Environmental Control Officers)  
Regulations 1999

This Certificate is issued on \_\_\_\_\_ and is valid until \_\_\_\_\_

\_\_\_\_\_  
**WANG NAN CHEE  
DIRECTOR-GENERAL OF PUBLIC HEALTH**

NEA SEAL

**SAMPLE**

**SAMPLE COPY OF REGISTRATION CARD**

Environmental Public Health Act (Chapter 95)  
Environmental Public Health  
(Registration of Environmental Control Officers) Regulations 1999

Photograph of Registered Person	Name: _____
	Address : _____ _____
	NRIC No: _____
	Registration No: _____

(Front)

This is to certify that the abovenamed has been registered by the Director-General of Public Health under the Environmental Public Health (Registration of Environmental Control Officers) Regulations 1999. This ECO identification card is issued on \_\_\_\_\_ and is valid until \_\_\_\_\_. It is to be carried on the abovenamed person wherever duties related to that of an ECO are carried out.

\_\_\_\_\_  
Director-General of Public Health

(Back)

**SITE ENVIRONMENTAL CONTROL PROGRAMME**

Reference No.:

Date:

To: Director-General of Public Health  
Attn: Head  
Environmental Health Department  
National Environment Agency  
40 Scotts Road  
Environment Building #21-00  
Singapore 228231

**SITE ENVIRONMENTAL CONTROL PROGRAMME**

1. I submit the Site Environmental Control Programme for the construction site at \_\_\_\_\_(Address) \_\_\_\_\_  
\_\_\_\_\_
2. Construction work will commence on \_\_\_\_\_(Date)\_\_\_\_\_
3. Project Title: \_\_\_\_\_
4. Contract sum of Project: \$ \_\_\_\_\_ million
5. Particulars of Occupier of Construction Site:
  - (i) Name of Construction Company/ Contractor:  
\_\_\_\_\_
  - (ii) Address of Company: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - (iii) Contact Number : \_\_\_\_\_ (Office)  
\_\_\_\_\_ (Pager/ Handphone)
  - (iv) Name of Environmental Control Officer(s) employed on the Construction Site:
    - (i) \_\_\_\_\_(Part time/ Full time)\*
    - (ii) \_\_\_\_\_(Part time/ Full time)\*

\* Please delete one

6. The following measures have been carried out on the construction site:  
(Please ✓ in  for work done/ will be done)

<b>A</b>	<b>Proper Waste Management</b>		<b>Remarks/ Recommendation</b>
i)	Licensed general waste collector engaged for collection and disposal of <u>solid</u> wastes Name of Waste Collector Company : _____	<input type="checkbox"/>	
ii)	Licensed general waste collector engaged for collection and disposal of <u>liquid</u> wastes Name of Waste Collector Company: _____	<input type="checkbox"/>	
iii)	Waste collection point(s) sited at a place easily accessible to waste collection vehicles	<input type="checkbox"/>	
iv)	Sufficient number of skips for storage of construction debris and wheeled bins for storage of organic and general wastes provided	<input type="checkbox"/>	
v)	Plastic bags available for containing organic and general wastes	<input type="checkbox"/>	
vi)	System in place to monitor the generation and disposal of construction waste debris	<input type="checkbox"/>	
<b>B</b>	<b>Noise Control Measures</b>		
i)	Arrangements made for setting up of noise monitoring stations	<input type="checkbox"/>	
ii)	All machineries and equipment (including generators) used on the construction site placed as far away as possible from residential estate	<input type="checkbox"/>	
<b>C</b>	<b>Dust Abatement Measures</b>		
i)	Paved wash bay provided for washing of vehicles before they leave the worksite	<input type="checkbox"/>	
ii)	Main access roads in the construction site adequately paved to prevent dust nuisance	<input type="checkbox"/>	

			Remarks/ Recommendation
iii)	Conditions to Licence to operate concrete batching plant are complied with	<input type="checkbox"/>	
<b>D</b>	<b>Site Vector Control Measures</b>		
i)	Pest Control Company engaged to carry out regular fogging and spraying of insecticide Name of Pest Control Company : _____	<input type="checkbox"/>	
ii)	Pest Control Company submitted vector control programme and vector control service reports to the Environmental Health Department, NEA	<input type="checkbox"/>	Please indicate date of submission:
iii)	Rodent-proof rooms or cabinets provided to store food provisions	<input type="checkbox"/>	
iv)	Construction site cleared of overgrown vegetation/ water bearing receptacles	<input type="checkbox"/>	
v)	Ground depressions/ unlevelled grounds evened out	<input type="checkbox"/>	
vi)	Open drains constructed	<input type="checkbox"/>	
<b>E</b>	<b>Silt Control Measures</b>		
i)	A system of silt control measures including temporary perimeter lined cut-off drains, silt fences and silt traps is provided within the worksite	<input type="checkbox"/>	

7. The following documents/ plans are also submitted.  
(Please ✓ those reports that are attached)

- Site and detailed plan showing the silt control measures
- Site plan on designated areas for storage of construction wastes
- Site and layout plan of all temporary structures, viz. canteens, toilet facilities, worker's quarters

Yours faithfully,

\_\_\_\_\_  
(Name of contractor)

\_\_\_\_\_  
(Signature of contractor)

\_\_\_\_\_  
(Company Stamp)

**SITE ENVIRONMENTAL CONTROL REPORT**

Date:

To Name of Occupier of Construction Site  
Designation  
Address of Company  
Name of Construction project

**SITE ENVIRONMENTAL CONTROL REPORT**

1. I submit the Site Environmental Control Report on the above construction site from \_\_\_(date)\_\_\_ to \_\_\_(date)\_\_\_.
2. The areas of inspection and recommendations described in this report includes (please ✓ the reports that are attached):
  - Environmental health hazards and irregularities observed on the construction site
  - Recommendations on actions to be taken by the occupier to rectify the irregularities
  - Vector borne or infectious disease outbreaks which took place
  - Investigation conducted on vector borne or infectious disease outbreaks which took place
  - Campaigns, competition, training course held or to be held on the construction site
  - Suggestions on co-operation necessary between the management of the construction site and any persons so as to ensure observance of the Act

Yours faithfully,

\_\_\_\_\_  
Name of ECO

\_\_\_\_\_  
Signature of ECO

\_\_\_\_\_  
Date



**(I) Environmental Health Hazards and irregularities observed on construction site/ recommendations to maintain healthy working conditions on the construction site**

The following irregularities were observed on the construction site:  
 (Please ✓ in  to indicate the irregularity)

<b>A</b>	<b>Solid Waste Management</b>		<b>Recommendations on work to be carried out</b>
i)	Overloading or spillage of construction wastes from skips	<input type="checkbox"/>	
ii)	Skips placed along public roads	<input type="checkbox"/>	
iii)	Amount of construction waste taken out from site is different from amount disposed of	<input type="checkbox"/>	
iv)	Organic food wastes stored together with construction wastes and not removed daily	<input type="checkbox"/>	
v)	Insufficient refuse bins lined with plastic bags around the bangsals	<input type="checkbox"/>	
vi)	Refuse bins not properly covered	<input type="checkbox"/>	
<b>B</b>	<b>Vector Control Measures</b> <b><u>Mosquito Breeding</u></b>		
i)	Potential mosquito breeding grounds observed, e.g. water bearing receptacles, ground depressions, uneven grounds, etc.	<input type="checkbox"/>	
ii)	Construction site and/ or bangsal littered	<input type="checkbox"/>	
iii)	Sand granular insecticide not applied into perforated bricks according to schedule	<input type="checkbox"/>	
iv)	Anti-mosquito oil and insecticides not applied into stagnant water according to schedule	<input type="checkbox"/>	
v)	Thermal fogging not carried out on the construction site at least once a week	<input type="checkbox"/>	

	<b><u>Rodent and Fly Infestation</u></b>		<b>Recommendations on work to be carried out</b>
i)	Food left in open and not stored in rodent-proof rooms or cabinets	<input type="checkbox"/>	
ii)	Rat burrows observed	<input type="checkbox"/>	
iii)	Potential fly breeding grounds observed	<input type="checkbox"/>	
<b>C</b>	<b>Infectious disease</b>		
i)	Foreign workers not screened for history of malaria	<input type="checkbox"/>	
ii)	Food handler(s) not inoculated against Typhoid	<input type="checkbox"/>	
iii)	Food handler(s) above 45 years old not screened for tuberculosis	<input type="checkbox"/>	
<b>D</b>	<b>Noise Control Measures</b>		
i)	Noise recorded at monitoring stations exceeds the maximum permissible level	<input type="checkbox"/>	
ii)	Generators and machineries sited close to residential estates	<input type="checkbox"/>	
iii)	Noisy activities, e.g. piling, concreting carried out during night time	<input type="checkbox"/>	
iv)	Equipment and machinery cause excessive noise emission due to irregular maintenance	<input type="checkbox"/>	
v)	No notice issued to inform residents on impending noisy construction works	<input type="checkbox"/>	
<b>E</b>	<b>Air Pollution Control &amp; Dust Abatement</b>		
i)	Lorries and vehicles carrying construction materials not properly and inadequately covered	<input type="checkbox"/>	

			<b>Recommendations on work to be carried out</b>
ii)	Vehicles not washed at the paved wash bay before they leave the worksite	<input type="checkbox"/>	
iii)	Emission of dark smoke from construction equipment and machinery	<input type="checkbox"/>	
iv)	Evidence of open burning of construction waste carried out	<input type="checkbox"/>	
v)	Dust preventive measures not taken, e.g. water sprinklers/ spray, shielding, netting, covers/ hoarding for aggregate/ sand stores not provided/ maintained	<input type="checkbox"/>	
vi)	No debris chutes to transfer debris from higher floors to ground floor	<input type="checkbox"/>	
<b>F</b>	<b>Food Hygiene</b>		
i)	Displayed food not covered or properly protected	<input type="checkbox"/>	
ii)	Food handlers using bare hands and not wearing gloves or using tongs or other suitable implements when handling ready-to-eat or cooked food	<input type="checkbox"/>	
iii)	Poor personal hygiene practices observed, e.g. smoking, dirty attire, etc.	<input type="checkbox"/>	
iv)	Dirty equipment and cooking utensils observed	<input type="checkbox"/>	
v)	Preparing food outside kitchen area	<input type="checkbox"/>	
<b>G</b>	<b>Silt Control</b>		
i)	Perimeter cut-off drains unlined/ silted	<input type="checkbox"/>	
ii)	Silt traps silted	<input type="checkbox"/>	
iii)	Silt fences damaged or choked	<input type="checkbox"/>	

			<b>Recommendations on work to be carried out</b>
iv)	Silt fences and supporting posts not firmly embedded in the ground	<input type="checkbox"/>	
v)	Silt traps interceptors not cleared	<input type="checkbox"/>	
vi)	Inadequate silt control facilities provided	<input type="checkbox"/>	
vii)	Drains in vicinity of worksite silted or obstructed due to the construction works	<input type="checkbox"/>	
viii)	Water run-off from the worksite is not channelled through the silt fences into silt traps	<input type="checkbox"/>	
ix)	Discharge of water directly into public drains	<input type="checkbox"/>	
x)	Earth surfaces or slopes adjacent to any drain not closed, turfed, paved or covered	<input type="checkbox"/>	
xi)	Inadequate measures taken to prevent any earth, sand, top-soil, cement, concrete, debris or any other material to fall or be washed into the drains from any stockpile thereof	<input type="checkbox"/>	
<b>H</b>	<b>Others</b>		
i)	Indiscriminate discharge of wastewater into watercourses, e.g. workers bathing and washing outside approved areas, defective sanitary/ sewer pipes, overflow from holding tank, overloading of septic tank, etc.	<input type="checkbox"/>	
ii)	Septic tank(s)/ holding tank(s) and/ or chemical/ portable toilet(s) overflowing or not maintained	<input type="checkbox"/>	
iii)	Servicing and repair of vehicles/ equipment carried out without facilities to contain the waste oil	<input type="checkbox"/>	

			<b>Recommendations on work to be carried out</b>
iv)	Waste/used oil not properly collected and sent to a licensed toxic waste collector	<input type="checkbox"/>	
v)	Soil treatment was not carried out by pest control operator in compliance with the water pollution control requirements.	<input type="checkbox"/>	
vi)	Drums/ carboys/ containers with oil/ chemicals found outside bunded/ permitted areas	<input type="checkbox"/>	
vii)	Oil spillages outside bunded/ controlled area	<input type="checkbox"/>	

**(II) Vector borne/ food borne/ infectious disease outbreak(s) which took place**

**\* To be completed if any vector borne/ food borne/ infectious disease outbreak(s) took place**

S/N	Type of Vector Borne/ Food Borne/ Infectious Disease	No. of people affected	Cause of outbreak	Follow-up action	Type of treatment (Indicate number of people for each type of treatment <sup>#</sup> )			Remarks
					A	B	C	

- <sup>#</sup>
- A - Self-medication
  - B - Clinical Treatment
  - C - Hospitalisation

**(III) Public Education**

**\* To be completed if any public education activity/ activities carried out**

S/N	Type of activity (Exhibition, Video show, brochures, pamphlets, etc.)	Purpose of activity	Where it is held	Duration of activity	Does it involve all employees (Yes/ No) If no, indicate number of employees involved

Reference:

Date:

To: Director-General of Public Health  
National Environment Agency  
Environmental Health Department  
40 Scotts Road  
Environment Building 21<sup>st</sup> storey  
Singapore 228231

Dear Sir,

**NOTIFICATION ON EMPLOYMENT OF ENVIRONMENTAL CONTROL OFFICER**

I wish to inform you that I have engaged an Environmental Control Officer for my construction project. The particulars of the ECO and the construction project are as follows:

ECO

- (i) Name : \_\_\_\_\_ (Part time/ Full time)\*
- (ii) ECO Registration Number : \_\_\_\_\_
- (iii) Date of employment : \_\_\_\_\_

Construction project

- (iv) Project title : \_\_\_\_\_
- (v) Location of project : \_\_\_\_\_  
\_\_\_\_\_
- (vi) Contract sum of project : \$ \_\_\_\_\_ million
- (vii) Date of commencement of project : \_\_\_\_\_

Yours faithfully,

\_\_\_\_\_  
(Name of contractor)

\_\_\_\_\_  
(Signature of contractor)

\_\_\_\_\_  
(Company Stamp)

\*Please delete one

**PENALTIES**

**(I) Penalties on ECO**

**Environmental Public Health (Registration of Environmental Control Officers) Regulations 1999**

S/No.	Nature of Offence	Penalties
1.	<p>Regulation 6(1)</p> <p>(i) Obtain registration by fraud or misrepresentation</p> <p>(ii) Fail to discharge duties set out in the Regulations/ the Code of Practice</p> <p>(iii) Fail to attend or complete any training course, seminar, conference or meeting required by the Director-General</p>	<p>Suspension or cancellation of Certificate of Registration</p>
2.	<p>Regulation 5(1)</p> <p>Carry out work as an ECO without a Certificate of Registration</p>	<p>Maximum fine of \$5,000 for first offence and \$10,000 for second or subsequent offence</p>
3.	<p>Regulation 6(5)</p> <p>Fail to surrender the Certificate of Registration upon suspension or cancellation within 14 days from the date of suspension or cancellation of registration</p>	<p>Maximum fine of \$1,000 for first offence and \$2,000 for second or subsequent offence</p>

**(II) Penalties against occupier of construction site**

**Environmental Public Health (Registration of Environmental Control Officers) Regulations 1999**

S/No.	Nature of Offence	Penalties
1.	Regulation 5(2)  Employ an ECO with the knowledge that he is not registered with the Director-General of Public Health or his Certificate of Registration has expired	Maximum fine of \$5,000 for first offence and \$10,000 for second or subsequent offence
2.	Regulation 10(3)  Fail to submit a Site Environmental Control Programme to the Director-General before work commences on the construction site and/or fail to take action or measures as recommended in the Site Environmental Control Programme.	Maximum fine of \$5,000 for first offence and \$10,000 for second or subsequent offence
3.	Regulation 10 (4)  (a) Fail to countersign the Site Environmental Control Report submitted by the ECO  (b) Fail to make the report available for inspection by the Commissioner or any environmental health officer  (c) Fail to take actions as recommended in the report	Maximum fine of \$5,000 for first offence and \$10,000 for second or subsequent offence
4.	Regulation 13  Fail to provide the ECO with facilities, equipment and information necessary for him to carry out his works	Maximum fine of \$1,000 for first offence and \$2,000 for second or subsequent offence



S/No.	Nature of Offence	Penalties
5.	<p>Regulation 14</p> <p>(a) Fail to permit the ECO to attend any training course, seminar, conference or meeting required by the Director-General</p> <p>(b) Fail to reimburse the ECO for attending courses</p> <p>(c) Make deductions from the remuneration of the ECO for attending courses required by the Commissioner</p>	<p>Maximum fine of \$1,000 for first offence and \$2,000 for second or subsequent offence</p>
6.	<p>Regulation 12</p> <p>(a) Fail to notify the Director-General within 14 days of the termination of employment of an ECO</p> <p>(b) Fail to employ another ECO within 14 days for the construction site upon termination of employment or suspension or cancellation of the registration of the incumbent ECO</p> <p>(c) Fail to employ a temporary ECO for the construction site when the ECO employed is on leave or absent for more than 5 continuous days</p>	<p>Maximum fine of \$5,000 for first offence and \$10,000 for second or subsequent offence</p>

**(III) Penalties against occupier of the construction site on environmental health matters**

**Environmental Public Health Act**

S/No.	Nature of Offence	Penalties
1.	Section 19 Earth littering of public roads, or dropping, scattering of sand, earth, gravel, clay, refuse, stone, or other similar material	Maximum fine of \$1,000 for first offence, \$2,000 for the second offence, and \$5,000 for third and subsequent offence
2.	Section 44 Failure to comply with Nuisance Order for: (i) Mosquito breeding or potential habitats (ii) Dust pollution, accumulation or deposit (iii) Fumes, vapours, gases, heat, radiation or smells (iv) Any machinery, plant or any method or process which causes a nuisance or is dangerous to public health or safety (v) Condition giving rise, or capable of giving rise to the breeding of flies and mosquitoes (vi) Any place which emanates noise or vibration as to amount to a nuisance (vii) Any other matters deems to be a nuisance under the Act	Maximum fine of \$10,000 for first offence, and \$20,000 for second and subsequent offence

## Environmental Pollution Control Act

S/No.	Nature of Offence	Penalties
1.	Section 15 (1), (2) and (3) Discharge or cause or permit to be discharged trade effluent, oil, chemical, sewage or other polluting matters into watercourses without a licence	Maximum fine of \$5,000
2.	Section 17 Discharge or cause or permit to be discharged toxic substances into any inland waters	Maximum fine of \$50,000 or imprisonment not exceeding 12 months or both for first offence; and maximum fine of \$100,000 and imprisonment for not less than one month and not exceeding 12 months or both for second and subsequent offence

## Control of Vectors and Pesticides Act

S/No.	Nature of Offence	Penalties
1.	Section 16  (i) Permit any condition(s) favourable to the propagation or harbouring of vectors  (ii) Fail to comply with the directions given by the Director-General of Public Health or any public health officer to terminate or prevent conditions favourable for propagation or harbouring of vectors from arising	Maximum fine of \$5,000 or maximum imprisonment of 3 months for first offence; fine of \$10,000 and/ or imprisonment of 6 months on second and subsequent offence

### Environmental Public Health (Public Cleansing) Regulations

S/No.	Nature of Offence	Penalties
1.	<p>Regulations 4</p> <p>(i) Fail to provide sufficient receptacles to contain trade refuse</p> <p>(ii) Fail to provide covered receptacles for trade refuse of shape, size and design approved by the Commissioner</p> <p>(iii) Deposit or cause or permit to be deposited trade refuse, rubbish in places other than in the receptacles</p> <p>(iv) Spillage of contents from receptacles</p>	<p>Maximum fine of \$150 for first offence, \$500 for second offence or \$1,000 for third or subsequent offence</p>

### Environmental Public Health (General Waste Collection) Regulations

S/No.	Nature of Offence	Penalties
1.	<p>Regulations 20</p> <p>Engage an unlicensed waste collector to collect, remove and dispose of refuse</p>	<p>Maximum fine of \$2,000 and \$100 for every day during which offence continues</p>

### Environmental Pollution Control (Control of noise at construction sites) Regulations 1999

S/No.	Nature of Offence	Penalties
1.	<p>Regulations 3</p> <p>Exceed the maximum permissible noise levels stipulated in the Regulations</p> <p>Regulations 4</p> <p>(i) Fail to set up equipment as directed by the Director to measure and record the noise level emitted</p> <p>(ii) Fail to submit records of the noise level readings including all relevant facts which may influence the values of the noise level readings</p>	<p>Maximum fine of \$10,000 for first offence, and \$20,000 for second and subsequent offence</p>

For clarifications on any aspect of the Code of Practice, please contact

Environmental Health Department  
National Environment Agency  
40 Scotts Road  
21<sup>st</sup> storey Environment Building  
Singapore 228231

Alternatively, you may contact us at (65) 1800-225 5632 or email us at  
[Contact\\_NEA@nea.gov.sg](mailto:Contact_NEA@nea.gov.sg)