

**ENVIRONMENTAL QUALITY  
(SEWAGE AND INDUSTRIAL  
EFFLUENTS) REGULATIONS, 1979**

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EFFLUENTS) REGULATIONS, 1979**

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## ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS, 1979\*

In exercise of the powers conferred by section 51 of the Environmental Quality Act, 1974, the Minister, after consultation with the Environmental Quality Council, makes the following regulations:

### PART I PRELIMINARY

#### 1. Citation and Commencement.

(1) These Regulations may be cited as the **Environmental Quality (Sewage and Industrial Effluents) Regulations, 1979**.

(2) These Regulations shall be deemed to have come into force on the 1st January 1979; except for those sources in existence before this date, these Regulations shall come into force on January 1, 1981.

#### 2. Interpretation.

In these Regulations, unless the context otherwise requires—

“effluent” means sewage or industrial effluent;

“industrial effluent” means liquid water or wastewater produced by reason of the production processes taking place at any industrial premises;

“inland waters” include any reservoir, pond, lake, river, stream, canal, drain, spring or well, any part of the sea abutting on the foreshore, and any other body of natural or artificial surface or subsurface water;

“licence” means a licence which a person may obtain for the purposes of section 25 of the Act;

“licensed premises” means premises occupied by a person who is the holder of a licence issued in respect of the premises;

“parameter” means any of the factors shown in the first column of the Third Schedule or in the Fifth Schedule and any other factors which the Director-General may specify in accordance with the provisions of paragraph (4) of regulation 8;

“sewage” means any liquid waste or wastewater discharge containing animal or vegetable matter in suspension or solution, and may include liquids containing chemicals in solution;

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\* Published as P.U. (A) 12/1979. Came into force on 1.1.1981.

“sewer” means any line of pipes or channels with their appurtenances designed and used to convey effluent;

“sewerage” system” means a system incorporating sewers and all other structures, devices, equipment, and appurtenances intended for the collection, transportation, and pumping of effluent including a treatment plant;

“treatment plant” means any facility for the conditioning of effluent to effect reduction or partial reduction of its potential to cause pollution.

**3. Application.**

These Regulations shall apply to discharges of effluent into any inland waters, other than the effluents discharged from prescribed premises or other premises specified in the First Schedule or both.

**PART II  
NEW SOURCES OF DISCHARGE**

**4. Prohibition against new and altered sources of effluent discharge.**

Notwithstanding any other provisions of these Regulations, no person without prior written permission of the Director-General shall—

- (1) carry out any work on any premises that may result in a new source of effluent discharge or cause a material change in the quantity or quality of the discharge from an existing source; or
- (2) construct on any land any building designed or used for a purpose that may cause the land or building to result in a new source of effluent discharge.

**5. Requirement and approval of plans.**

(1) An application to carry out any work, building, erection or alteration specified in regulation 4 shall be submitted to the Director-General in the prescribed form and shall be accompanied by the prescribed fee under regulation 21.

(2) The Director-General may grant such application either subject to conditions or unconditionally and may require the applicant—

- (a) to repair, alter, replace or install control equipment;
- (b) to conduct a monitoring programme at his own expense or bear the cost of such programme within such period or at such time and in such manner as the Director-General may specify.

PART III  
ACCEPTABLE CONDITIONS OF DISCHARGE INTO  
INLAND WATERS

**6. Prohibition of discharge of effluent containing certain substances.**

No person shall discharge or cause or permit the discharge of any of the following substances into any inland waters;

- (1) any inflammable solvent;
- (2) any tar or other liquids immiscible with water;
- (3) refuse, garbage, sawdust, timber, human or animal waste or solid matters.

**7. Standard methods of analysis of effluents.**

For the purposes of these Regulations, the effluent discharged into any inland waters shall be analysed in accordance with the latest edition of the methods specified in the Second Schedule, as amended from time to time, or in accordance with such other methods of analysis as the Director-General thinks fit.

**8. Parameter limits of effluent to be discharged into inland waters.**

(1) No person shall discharge effluent, analysed in accordance with regulation 7, which contains substances in concentrations greater than those specified as parameter limits of—

- (a) Standard A, as shown in the third column of the Third Schedule, into any inland waters within the catchment areas specified in the Fourth Schedule; or
- (b) Standard B, as shown in the fourth column of the Third Schedule, into any other inland waters.

(2) Where two or more of the metals specified as parameters (xii) to (xvi), pursuant to paragraph (1) of this regulation, are present in the effluent, the concentration of these metals shall not be greater than—

- (a) 0.5 milligrammes per litre in total, where Standard A is applicable;
- (b) 3.0 milligrammes per litre in total, and 1.0 milligramme per litre in total for soluble forms, where Standard B is applicable.

(3) Where Standard B is applicable and when both phenol and free chlorine are present in the same effluent, the concentration of phenol individually, shall not be greater than 0.2 milligrammes per litre and the concentration of free chlorine individually, shall not be greater than 1 milligramme per litre.

(4) Where the Director-General deems it necessary, he may by notice in writing specify the acceptable conditions of discharge including the parameter limits of effluent, with respect to any or all of the parameters specified in the

Fifth Schedule and any other parameters not listed anywhere in these Regulations.

**PART IV  
DISCHARGE OF EFFLUENT AND SLUDGE ONTO LAND**

**9. Restrictions on the discharge of effluents.**

No person shall discharge or cause or permit the discharge of any effluent in or on any soil or surface of any land without the prior written permission of the Director-General.

**10. Restrictions on disposal of sludges.**

No person shall discharge or cause or permit the discharge of any solid waste or sludge that is generated from any production or manufacturing processes or from any effluent treatment plant in or on any soil or surface of any land without the prior written permission of the Director-General.

**PART V  
LICENCE FOR CONTRAVENTION OF ACCEPTABLE CONDITIONS**

**11. Acceptable conditions which may be contravened.**

(1) In accordance with the provisions of section 25 (1) of the Act, application for a licence may be made for the purposes of the contravention of acceptable conditions of effluent discharge specified in regulation 8.

(2) An application for a licence shall be made in accordance with the procedures specified in the Environmental Quality (Licensing) Regulations, 1977.

(3) The Director-General may refuse to grant the application for a licence if he is satisfied that the granting of application for such a licence is likely to cause a worsening of condition in the inland waters or cause pollution in any other segment or element of the environment.

(4) Without prejudice to the generality of paragraph (3) of this regulation, the Director-General may grant the application for a licence if he is satisfied that—

- (a) there is no known practicable means of control to enable compliance with the acceptable conditions; or
- (b) the estimated cost to be incurred for compliance will be prohibitive having regard to the nature and size of the industry, trade, or process being carried out in the premises discharging the effluent; or
- (c) the design and construction of any treatment plant or other control equipment and their commissioning require a longer period than the period for compliance with these Regulations; or

- (d) the imposition of the acceptable conditions as prescribed may result in circumstances which, in his opinion and having regard to all factors, are not reasonably practicable or are contrary to the intent and spirit of the Act; or
- (e) a sewerage system is to be provided and the effluent is permitted to be admitted into the sewerage system.

(5) For the purpose of subparagraph (4) (e), in imposing conditions on a licence limiting the parameters of effluent to be discharged, the Director-General shall be guided—

- (a) by the parameter limits of Standard B in respect of the discharge into any inland waters specified in regulation 8 (1) (a); or
- (b) by the parameter limits specified in the Sixth Schedule in respect of the discharge into any other inland waters.

**12. Reporting changes in information furnished for purposes of application.**

An applicant for a licence or for the renewal or transfer of a licence shall, within seven days of the occurrence of any material change in any information furnished in his application or furnished in writing pursuant to a request by the Director-General under section 11 (2) of the Act give the Director-General a report in writing of the change.

**13. Making changes that alter quality of effluent.**

(1) The holder of a licence shall not make, or cause or permit to be made, any change to the premises or in the manner of running, using, maintaining or operating the premises or in any operation or process carried on at the premises, which change causes, or is intended or is likely to cause, a material increase in the quantity or quality of effluent or both discharged from the premises, unless prior written approval of the Director-General has been obtained for the change.

(2) For the purposes of paragraph (1), changes to licensed premises include—

- (a) any change in the construction, structure, or arrangement of the premises or any building serving the premises;
- (b) any change in the construction, structure, arrangement, alignment, direction, or condition of any channelling device, system, or facility serving the premises; and
- (c) any change of, to, or in any plant, machine, or equipment used or installed at the premises.

**14. Display of licence.**

The holder of a licence shall display his licence, together with every docu-



ment forming part of the licence, in a conspicuous position in the principal building of the premises.

**15. Continuance of existing conditions and restrictions in case of change in occupancy.**

Where a person becomes the occupier of licensed premises in succession to another person who holds a yet unexpired licence in respect of the premises, then—

- (1) for a period of fourteen days after the change in occupancy; or
- (2) where the new occupier makes an application within that period for the transfer to him of the licence, for the period from the change in occupancy until final determination of his application,

the conditions and restrictions of the licence shall be binding on the new occupier and shall be observed by him, notwithstanding that he is not yet the holder of the licence or that the licence may, during the period specified in paragraph (1) or (2), as the case may be, have expired.

**PART VI  
MISCELLANEOUS**

**16. Point of discharge.**

(1) The point or points of discharge of effluent shall be determined by the Director-General.

(2) The position and design of the outlet at the point or points of discharge of effluent into any inland waters or onto any land as determined in paragraph (1) shall not be altered or changed without the prior written approval of the Director-General.

(3) Wherever the concentration of any parameter of effluent discharged or to be discharged is mentioned in these Regulations, the reference, unless the context otherwise requires, is to the concentration as at the point of discharge determined in paragraph (1).

**17. Dilution of effluent.**

No person shall dilute, or cause or permit to be diluted, any effluent, whether raw or treated at any time or point after it is produced at any premises unless prior written authorisation of the Director-General has been obtained for the dilution and the dilution is done according to the terms and conditions of the authorisation.

**18. Spill or accidental discharge.**

(1) In the event of the occurrence of any spill or accidental discharge of the substances specified in regulation 8 which either directly or indirectly

gains or may gain access into any inland waters, the person or persons responsible for such occurrence shall immediately inform the Director-General of the occurrence.

(2) The person or persons responsible for the occurrence of the spill or accidental discharge referred to in paragraph (1) shall be required, to every reasonable extent, to contain, cleanse or abate the spill or accidental discharge or to recover substances involved in the spill or accidental discharge in a manner satisfactory to the Director-General.

(3) The Director-General shall estimate any damage caused by the spill or accidental discharge and may recover all costs and expenses from the person or persons responsible for the occurrence of the spill or accidental discharge.

**19. Provisions for inspection.**

A person who discharges effluent into any inland waters or onto any land shall, in connection with such discharge, install such sampling test point or points, inspection chambers, flow-meters, and recording and other apparatuses as the Director-General may, from time to time, require.

**20. Occupier to render assistance during inspections.**

An occupier of any premises shall provide the Director-General or any other officer duly authorised in writing by him every reasonable assistance or facility available at premises, including labour, equipment, appliances, and instruments that he may require for the purpose of taking any action that he is empowered by section 38 of the Act to take in respect of the premises.

**PART VII  
FEES**

**21. Fee for written permission.**

The fee for a written permission under regulation 4 is \$100.00.

**22. Fee for licence including renewal of licence.**

(1) The fee for a licence, including the renewal of a licence, is \$100.00 plus an effluent-related amount computed according to the method prescribed in the Seventh Schedule.

(2) The fee of \$100.00 shall accompany the application and shall not be refundable.

(3) The effluent-related amount shall not become due until called for.

**23. Waiver of fee.**

(1) If the Director-General is satisfied that research on effluent disposal or

treatment of a kind or scale that is likely to benefit the cause of environmental protection is being or is to be carried out at any licensed premises, he may, with the approval of the Minister, wholly or partly waive any effluent-related amount payable by virtue of regulation 22 (3).

(2) In deciding on the extent of waiver, the Director-General shall be guided—

- (a) by a consideration of how much of the amount of effluent discharged or to be discharged is involved in the research; or
- (b) by a consideration of the physical and chemical characteristics of the effluent discharged or to be discharged.

**24. Fee for transfer of licence.**

The fee for a transfer of licence is \$30.00.

**FIRST SCHEDULE**

***ENVIRONMENTAL QUALITY ACT, 1974***

**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS, 1979**

**[Regulation 3]**

**LIST OF DISCHARGES TO WHICH THESE REGULATIONS DO NOT APPLY**

Subject to the provisions of regulation 6, these Regulations shall not apply to discharges of effluent into any inland waters from the following sources:

1. Processing of oil-palm fruit or oil-palm fresh-fruit bunches into crude palm oil, whether as an intermediate or final product;
2. Processing of natural rubber in technically specified form, latex form including prevulcanised or the form of modified and special purpose rubber, conventional sheet, skim, crepe or scrap rubber;
3. Mining activities;
4. Processing, manufacturing, washing or servicing of any other products or goods—
  - (1) that produce effluent of less than 60 cubic metres (13,000 imperial gallons) per day;
  - (2) that the effluent of which does not contain those contaminants listed as parameters (vi) to (xvi) in the first column of the Third Schedule;
  - (3) where the total load of biochemical oxygen demand of the effluent fixed at 20 degrees Centigrade for 5 days or suspended solid or both, shall not exceed 6 kilogrammes per day (concentration 100 milligrammes per litre);
  - (4) in any housing or commercial development or both of less than 30 units, without affecting the generality of 4 (3).

**SECOND SCHEDULE**  
**ENVIRONMENTAL QUALITY ACT, 1974**  
**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL**  
**EFFLUENTS) REGULATIONS, 1979**  
**[Regulation 7]**

**STANDARD METHODS OF ANALYSIS OF EFFLUENT**

1. "Standard Methods of the Examination of Water and Wastewater" published jointly by the American Public Health Association, the American Water Works Association and the Water Pollution Control Federation of the United States; or
2. "Analysis of Raw, Potable and Wastewaters" published by the Department of the Environment of the United Kingdom.

**THIRD SCHEDULE**  
**ENVIRONMENTAL QUALITY ACT, 1974**  
**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL**  
**EFFLUENTS) REGULATIONS, 1979**  
**(Regulation 8 (1), 8 (2), 8 (3))**

**PARAMETER LIMITS OF EFFLUENT OF STANDARDS A AND B**

<i>Parameter</i>	<i>Unit</i>	<i>Standard</i>	
		<i>A</i>	<i>B</i>
(1)	(2)	(3)	(4)
(i) Temperature .. .. .	°C	40	40
(ii) pH Value .. .. .	-	6.0-9.0	5.5-9.0
(iii) BOD <sub>5</sub> at 20°C .. .. .	mg/l	20	50
(iv) COD .. .. .	mg/l	50	100
(v) Suspended Solids .. .. .	mg/l	50	100
(vi) Mercury .. .. .	mg/l	0.005	0.05
(vii) Cadmium .. .. .	mg/l	0.01	0.02
(viii) Chromium, Hexavalent .. .. .	mg/l	0.05	0.05
(ix) Arsenic .. .. .	mg/l	0.05	0.10
(x) Cyanide .. .. .	mg/l	0.05	0.10
(xi) Lead .. .. .	mg/l	0.10	0.5
(xii) Chromium, Trivalent .. .. .	mg/l	0.20	1.0
(xiii) Copper .. .. .	mg/l	0.20	1.0
(xiv) Manganese .. .. .	mg/l	0.20	1.0
(xv) Nickel .. .. .	mg/l	0.20	1.0
(xvi) Tin .. .. .	mg/l	0.20	1.0
(xvii) Zinc .. .. .	mg/l	1.0	1.0
(xviii) Boron .. .. .	mg/l	1.0	4.0
(xix) Iron (Fe) .. .. .	mg/l	1.0	5.0
(xx) Phenol .. .. .	mg/l	0.001	1.0
(xxi) Free Chlorine .. .. .	mg/l	1.0	2.0
(xxii) Sulphide .. .. .	mg/l	0.50	0.50
(xxiii) Oil and Grease .. .. .	mg/l	Not Detectable	10.0

**FOURTH SCHEDULE**  
**ENVIRONMENTAL QUALITY ACT, 1974**  
**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL**  
**EFFLUENTS) REGULATIONS, 1978**  
**[Regulation 8 (1)]**

**LIST OF CATCHMENT AREAS WHERE STANDARD A APPLIES**

1. The catchment areas referred to in this regulation shall be the areas upstream of surface or above sub-surface water supply intakes, for the purpose of human consumption including drinking.
2. For the purpose of this regulation, the water supply intakes shall include the public water supply intakes specified below;

**(1) The State of Johor**

<i>Location of Water Intake</i>		<i>Name of River/Reservoir/Well</i>	<i>Water Supply Scheme</i>
(1)	(2)	(3)	
<i>Longitude (East)</i>	<i>Latitude (North)</i>		
103° 26' 00"	1° 34' 00"	Sg. Air Hitam .. ..	Pontian
103° 03' 30"	2° 00' 42"	Sg. Bekok .. ..	Yong Peng (Baru)
103° 08' 00"	2° 18' 30"	Sg. Bekok .. ..	Bekok
102° 34' 55"	2° 19' 48"	Sg. Belembang .. ..	Gunong Ladang
103° 18' 00"	1° 49' 40"	Sg. Benuat .. ..	Simpang Renggam
103° 03' 42"	2° 22' 48"	Sg. Gatom .. ..	Labis (Lama)
104° 03' 42"	1° 53' 24"	Sg. Gembot .. ..	Telok Mahkota/Kuala Sedihi
102° 39' 42"	2° 25' 24"	Sg. Jementah .. ..	Jementah
103° 52' 24"	1° 44' 42"	Sg. Johor .. ..	Lembaga Kemudahan Awam Singapura
103° 03' 18"	2° 27' 28"	Sg. Juaseh .. ..	Air Panas
102° 56' 30"	2° 31' 06"	Sg. Juaseh .. ..	Kemelah
102° 30' 24"	2° 07' 35"	Sg. Kesang .. ..	Kesang
103° 00' 05"	1° 45' 45"	Sg. Koris .. ..	Koris (Batu Pahat)
102° 59' 12"	2° 20' 00"	Sg. Labis .. ..	Labis (Baru)
103° 01' 48"	2° 23' 30"	Sg. Labis .. ..	Labis (Baru)
103° 40' 18"	2° 35' 12"	Sg. Labong .. ..	Endau
103° 55' 18"	1° 31' 18"	Sg. Layang-Layang ..	Johor Bahru (Proposed Scheme)
103° 03' 00"	2° 14' 48"	Sg. Lenek .. ..	Chaah
103° 19' 20"	2° 01' 20"	Sg. Mengkibol .. ..	Kluang
103° 51' 42"	2° 16' 30"	Sg. Mersing .. ..	Jemaluang
102° 47' 15"	2° 18' 30"	Sg. Muar .. ..	Bukit Serampang
102° 48' 50"	2° 14' 40"	Sg. Muar .. ..	Lenga (Muar)
102° 49' 48"	2° 21' 12"	Sg. Muar/Sg. Tui ..	Bukit Kepong
103° 12' 48"	2° 10' 54"	Sg. Paloh .. ..	Paloh
103° 50' 00"	1° 49' 48"	Sg. Pelepah Kanan ..	Kota Tinggi

## (1) The State of Johor – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	
Longitude (East)	Latitude (North)		
104° 08' 30"	1° 22' 00"	Sg. Pengerang .. ..	Pengerang (Lama)
103° 27' 20"	1° 43' 18"	Sg. Pontian .. ..	Bukit Batu
103° 24' 58"	1° 33' 57"	Sg. Pontian Besar ..	Pontian
103° 24' 58"	1° 34' 35"	Sg. Pontian Besar ..	Bukit Batu
104° 12' 15"	1° 23' 35"	Sg. Rengit .. ..	Pengerang (Baru)
103° 24' 15"	1° 53' 25"	Sg. Sayong .. ..	Renggam
103° 29' 00"	1° 49' 00"	Sg. Sayong .. ..	Layang-Layang
102° 49' 10"	2° 30' 30"	Sg. Segamat .. ..	Segamat
102° 49' 48"	2° 31' 06"	Sg. Segamat .. ..	Segamat (Baru)
103° 58' 15"	1° 43' 00"	Sg. Selayut .. ..	Air Tawar
103° 42' 59"	1° 44' 15"	Sg. Semangor .. ..	Komplek Kulai
103° 06' 24"	1° 52' 18"	Sg. Semberong .. ..	Parit Raja
103° 22' 00"	2° 03' 55"	Sg. Semberong .. ..	Kluang Baru
103° 56' 48"	1° 31' 18"	Sg. Serai .. ..	Kong Kong
102° 55' 40"	1° 59' 00"	Sg. Simpang Kiri .. ..	Parit Sulong
102° 44' 18"	2° 10' 40"	(i) Sg. Pagoh .. ..	Muar (Panchor)
		(ii) Sg. Muar .. ..	-
103° 44' 24"	1° 33' 00"	Sg. Tebrau .. ..	Lembaga Kemudahan Awam Singapura
103° 47' 48"	2° 31' 00"	Sg. Tenglu .. ..	Tenglu/Mersing
103° 34' 14"	1° 32' 30"	(i) Kolam Air Singapura (Pontian Kecil)	Lembaga Kemudahan Awam Singapura
103° 38' 14"	1° 34' 05"	(ii) Takong Air Singapura (Gunung Pulau Besar)	-
102° 42' 00"	2° 07' 20"	Imp. Reservoir .. ..	Pengkalan Bukit (Muar)
102° 56' 35"	1° 48' 50"	Imp. Reservoir .. ..	Bukit Benang (Batu Pahat)

## (2) The State of Kedah

100° 29' 12"	6° 19' 26"	Sg. Air Terjun .. ..	Buki Wang
100° 57' 09"	5° 39' 18"	(i) Sg. Baling .. ..	Baling
100° 57' 33"	5° 40' 18"	(ii) Sg. Charok Juan .. ..	-
99° 49' 05"	6° 20' 41"	(i) Sg. Batu Asah .. ..	Langkawi
99° 46' 21"	6° 22' 13"	(ii) Sg. Saga .. ..	-
100° 25' 01"	5° 44' 21"	Sg. Batu Pahat .. ..	Merbok
100° 26' 36"	5° 45' 06"	Sg. Bujang .. ..	Tupah
100° 28' 26"	5° 37' 49"	Sg. Gurun .. ..	Gurun
100° 34' 54"	5° 11' 48"	Sg. Hill .. ..	Serdang
100° 43' 50"	5° 50' 40"	Sg. Hill .. ..	Sik
100° 39' 55"	5° 23' 48"	Sg. Karangan .. ..	Karangan
100° 41' 13"	6° 03' 28"	Sg. Krian .. ..	Selama
100° 45' 06"	5° 19' 21"	Sg. Krian .. ..	Mahang
100° 39' 12"	5° 41' 43"	Sg. Muda .. ..	Teloi Kanan

## (1) The State of Kedah – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	(4)
Longitude (East)	Latitude (North)		
100° 44' 04"	6° 01' 01"	Sg. Muda .. ..	Lubuk Merbau
100° 25' 57"	6° 12' 20"	(i) Sg. Padang Terap ..	Bukit Pinang
100° 27' 23"	6° 12' 22"	(ii) JPT Canal .. ..	—
100° 28' 26"	6° 14' 20"	(i) Sg. Padang Terap ..	Kuala Nerang
100° 37' 09"	6° 14' 58"	(ii) Sg. Pedu .. ..	—
100° 40' 31"	5° 49' 03"	Sg. Pau .. ..	Jeniang
100° 36' 07"	5° 58' 28"	(i) Sg. Putat .. ..	Sg. Tiang
100° 36' 43"	5° 58' 18"	(ii) Sg. Rambai .. ..	—
100° 26' 42"	6° 24' 11"	Sg. Temin .. ..	Changloon
100° 36' 58"	6° 15' 29"	Sg. Tenoi .. ..	Teroi
100° 31' 45"	5° 07' 28"	Sg. Tipis .. ..	Bandar Baru
100° 24' 26"	5° 48' 30"	Perigi .. ..	Perigi
100° 24' 55"	5° 47' 34"	Perigi .. ..	Yen
100° 30' 07"	5° 34' 00"	Perigi .. ..	Pinang Tunggal
100° 43' 11"	5° 06' 18"	Perigi .. ..	Sg. Taka

## (3) The State of Kelantan

102° 05' 45"	5° 55' 50"	Sg. Jegor .. ..	Kemahang
102° 11' 48"	5° 31' 35"	Sg. Kelantan .. ..	Kuala Krai
102° 09' 23"	6° 02' 18"	Sg. Kelantan .. ..	Pasir Mas
102° 09' 20"	5° 47' 20"	Sg. Kelantan .. ..	Tanah Merah
101° 53' 25"	5° 46' 40"	Sg. Polor .. ..	Air Lanas
102° 24' 50"	5° 49' 45"	Sg. Resau .. ..	Pasir Putih
102° 12' 55"	5° 45' 05"	Sg. Sat .. ..	Macang

## (4) The State of Melaka

102° 18' 10"	2° 27' 5"	Sg. Air Pandan .. ..	Hutan Perca
102° 23' 33"	2° 23' 13"	Sg. Anak Air Cabai ..	Kemendore III dan IV
102° 15' 25"	2° 24' 35"	Sg. Batang Melaka ..	Gadek
102° 29' 50"	2° 16' 30"	Sg. Chin Chin .. ..	Chin Chin
102° 29' 27"	2° 17' 21"	Sg. Kesang .. ..	Perkampungan Felda- Kemendore I dan II
102° 15' 47"	2° 17' 54"	Sg. Melaka .. ..	Bukit Sebukor
102° 18' 4"	2° 16' 26"	Kolam Air Air Keroh ..	Air Keroh/Bukit Bruang
102° 35' 16"	2° 24' 23"	Kolam Air Asahan ..	Bukit Duyong

## (5) The State of Negeri Sembilan

102° 15' 22"	2° 56' 48"	Sg. Air Baning .. ..	Simpang Pertang
101° 54' 12"	2° 49' 10"	Sg. Bangkong .. ..	Mantin
102° 01' 28"	2° 48' 09"	Sg. Batang Benar ..	Pantai (Seremban)
102° 13' 24"	2° 56' 00"	Sg. Batang Melaka ..	Tampin
102° 03' 12"	2° 39' 23"	Sg. Beringin .. ..	Pedas

## (5) The State of Negeri Sembilan – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	
Longitude (East)	Latitude (North)		
102° 37' 02"	2° 34' 34"	Sg. Gemas .. ..	Gemas
102° 21' 16"	2° 40' 10"	Sg. Jelai .. ..	Bukit Rokan
102° 16' 24"	2° 36' 36"	Sg. Johol .. ..	Johol
102° 03' 10"	2° 53' 10"	Sg. Kemin .. ..	Kuala Klawang (Jekebu)
102° 56' 47"	2° 37' 08"	Sg. Linggi .. ..	Sg. Linggi
102° 20' 28"	3° 05' 17"	Sg. Lui .. ..	Sg. Lui
102° 12' 56"	2° 40' 42"	Sg. Mengku .. ..	Kuala Pilah
102° 15' 00"	2° 44' 50"	Sg. Muar .. ..	Kuala Pilah
102° 22' 27"	2° 47' 57"	Sg. Muar/Sungai Jempul	Bahau (Baru)
102° 30' 10"	2° 42' 19"	Sg. Muar .. ..	Rompin
102° 32' 34"	2° 40' 10"	Sg. Muar .. ..	Pasir Besari
102° 11' 30"	2° 54' 56"	Sg. Pertang .. ..	Pertang
102° 23' 18"	2° 48' 38"	Sg. Serting .. ..	Bahau (Lama)
102° 08' 53"	2° 41' 52"	Sg. Sri Menanti (Sg. Buyau)	Sri Menanti
102° 07' 36"	2° 44' 30"	Sg. Terachi .. ..	Terachi

## (6) The State of Pahang

103° 01' 54"	3° 07' 63"	Sg. Aur .. ..	Ibam, Kota Perdana, Mu'adzam Shah Paloh Hinai
102° 32' 48"	3° 16' 10"	Sg. Bera .. ..	Bera
102° 36' 37"	3° 09' 46"	Sg. Bera .. ..	Kepayang (DARA) Town 34 dan 35 (Tentative Project)
101° 55' 00"	3° 29' 00"	Sg. Benus .. ..	Bentong
101° 23' 30"	4° 31' 20"	Sg. Bertam .. ..	Berinchang dan Tanah Rata
101° 24' 10"	4° 24' 35"	Sg. Bertam .. ..	Lembah Bertam
101° 51' 30"	3° 45' 24"	Sg. Bilut .. ..	Raub
101° 53' 00"	3° 41' 00"	Sg. Bilut .. ..	LKTP Lurah Bilut
101° 59' 00"	3° 44' 30"	Sg. Chalit dan Sg. Klau	Sungai Ruan
101° 48' 30"	3° 54' 40"	Sg. Cheroh .. ..	Cheroh
101° 54' 00"	3° 53' 18"	Sg. Dong .. ..	Dong
103° 26' 35"	2° 37' 15"	Sg. Endau .. ..	Seladang
102° 7' 10"	3° 15' 20"	Sg. Gapoi .. ..	Telemong/Manchis
101° 24' 20"	4° 34' 40"	Sg. Ikan .. ..	Kampong Raja
101° 23' 15"	4° 25' 45"	Sg. Jasin .. ..	Lubok Tamang
101° 59' 00"	4° 14' 25"	Sg. Jelai .. ..	Padang Tengku
102° 16' 00"	4° 05' 00"	Sg. Jelai .. ..	Mela
102° 39' 00"	3° 44' 45"	Sg. Jempul .. ..	LKTP Ulu Jempul
102° 31' 00"	3° 31' 00"	Sg. Jengka .. ..	Kg. Awah/Sekim LKTP Sg. Nerek
102° 38' 45"	3° 47' 00"	Sg. Jerik .. ..	Ng Tiang Kiat
102° 52' 40"	2° 57' 51"	Sg. Keratong .. ..	Cempaka, Kota Bahagia, Kota Shahbandar Melati



## (6) The State of Pahang – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	(3)
Longitude (East)	Latitude (North)		
102° 51' 27"	2° 50' 51"	Sg. Keratong .. ..	Cendrawasih, Pekoti Timor, Perantau Damai, Perwira Jaya
102° 51' 30"	3° 39' 45"	Sg. Kertam .. ..	LKTP Kg. New Zealand
102° 00' 30"	3° 33' 00"	Sg. Klau .. ..	Kampung Sertik
101° 47' 45"	4° 12' 30"	Sg. Koyan .. ..	Sg. Koyan
103° 15' 54"	3° 49' 42"	Sg. Kuantan .. ..	Kuantan
102° 35' 30"	3° 29' 00"	Sg. Lanting .. ..	Sekolah Perdagangan Chenor
102° 02' 10"	4° 10' 20"	Sg. Lipis .. ..	Kuala Lipis
101° 23' 50"	4° 26' 20"	Sg. Luchut .. ..	Habu
102° 46' 00"	3° 35' 00"	Sg. Maran .. ..	Maran/Bukit Tajau
103° 01' 08"	3° 23' 30"	Sg. Mentiga .. ..	Cini, Cini Timor
102° 16' 00"	3° 54' 18"	Sg. Pahang .. ..	Sg. Putat (Banjir)
102° 21' 42"	3° 57' 30"	Sg. Pahang .. ..	Jerantut
103° 23' 00"	3° 30' 15"	Sg. Pahang .. ..	Pekan
103° 23' 30"	3° 30' 54"	Sg. Pahang .. ..	Peramu
101° 25' 20"	4° 31' 10"	(i) Sg. Palas .. ..	Tringkap
101° 25' 03"	4° 30' 02"	(ii) Sg. Tringkap .. ..	-
101° 24' 40"	4° 30' 05"	Sg. Perlong .. ..	Kuala Terla
102° 01' 30"	3° 42' 18"	Sg. Pertang .. ..	LKTP Lembah Klau
101° 55' 49"	3° 03' 20"	Sg. Riang .. ..	Sg. Ruan
101° 21' 40"	4° 24' 20"	(i) Sg. Ringlet .. ..	Ringlet
101° 23' 10"	4° 24' 45"	(ii) Sg. Telaga .. ..	-
102° 22' 18"	4° 04' 42"	Sg. Retang .. ..	LKTP Padang Piol
102° 21' 00"	3° 29' 00"	Sg. Semantan .. ..	Temerloh/Mentakab
102° 31' 48"	3° 52' 00"	Sg. Tekam .. ..	Sg. Tekam
102° 33' 42"	3° 50' 00"	Sg. Tekam .. ..	LKTP Tekam Utara
102° 02' 00"	3° 23' 00"	Sg. Telemong .. ..	Karak
102° 26' 00"	3° 50' 30"	Sg. Terpai .. ..	Bukit Nekmat (Banjir)
101° 48' 30"	3° 44' 00"	Sg. Tras .. ..	Tras
102° 18' 00"	3° 18' 00"	Sg. Triang .. ..	Bt. Mendi/Bt. Ruchong
101° 24' 30"	3° 14' 30"	Sg. Triang .. ..	Triang
101° 43' 24"	3° 42' 18"	Kolam Air .. ..	Bukit Fraser
103° 29' 36"	2° 48' 24"	Perigi (Well Points) Kg. Kolam Air	Rompin

## (7) The State of Penang

100° 16' 10"	5° 24' 00"	Sg. Air Hitam .. ..	Pulau Pinang
100° 15' 56"	5° 24' 13"	Sg. Air Itam (Sg. Tepi)	Pulau Pinang Bekalan untuk Kolam Air, Air Itam
100° 16' 58"	5° 26' 25"	Sg. Air Terjun .. ..	Pulau Pinang
100° 14' 41"	5° 26' 53"	Sg. Batu Ferringhi ..	Pulau Pinang

## (7) The State of Penang – (cont.)

<i>Location of Water Intake</i>		<i>Name of River/Reservoir/Well</i>	<i>Water Supply Scheme</i>
(1)		(2)	(3)
<i>Longitude (East)</i>	<i>Latitude (North)</i>		
100° 14' 28"	5° 26' 51"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 14' 20"	5° 27' 17"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferrenghi
100° 14' 42"	5° 26' 52"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 14' 45"	5° 26' 55"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 14' 45"	5° 27' 12"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 14' 45"	5° 27' 27"	Sg. Batu Ferringhi ..	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 17' 32"	5° 26' 04"	Highlands .. ..	Pulau Pinang
100° 17' 28"	5° 25' 02"	Highlands .. ..	Bekalan untuk Kolam Air, Air Terjun
100° 16' 23"	5° 27' 39"	Sg. Kecil .. ..	Pulau Pinang
100° 16' 18"	5° 27' 44"	Sg. Kecil .. ..	Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 16' 37"	5° 27' 23"	Sg. Klean .. ..	Pulau Pinang
100° 15' 49"	5° 26' 23"	Talian Kuasa Sg. Klean	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 13' 33"	5° 24' 15"	Sg. Pinang Barat .. ..	Pulau Pinang
100° 13' 40"	5° 24' 16"	Sg. Pinang Barat .. ..	Bekalan untuk Kolam Air Balik Pulau
100° 14' 17"	5° 28' 15"	Anak Sungai Sebelah 3Vs	Pulau Pinang
100° 16' 33"	5° 27' 41"	Sg. Siru .. ..	Pulau Pinang
100° 16' 45"	5° 24' 55"	Anak Sungai Tats ..	Pulau Pinang
100° 12' 13"	5° 27' 00"	Sg. Telok Awak .. ..	Pulau Pinang
100° 12' 14"	5° 26' 53"	Sg. Telok Awak .. ..	Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 12' 15"	5° 26' 51"	Sg. Telok Awak .. ..	Bekalan untuk Kolam Air Guillemard dan Kolam Air

## (7) The State of Penang – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	(3)
Longitude (East)	Latitude (North)		
100° 12' 50"	5° 26' 56"	Sg. Telok Bahang ..	Pulau Pinang
100° 15' 25"	5° 27' 47"	Sg. Tengah .. ..	Pulau Pinang
100° 13' 18"	5° 26' 37"	Sg. Ubi (anak Sg. Telok Bahang)	Pulau Pinang Bekalan untuk Kolam Air Guillemard dan Kolam Air Batu Ferringhi
100° 14' 55"	5° 25' 09"	Kolam Air Tiger Hill ..	Pulau Pinang Bekalan untuk kawasan penduduk Bukit Bendera
100° 15' 51"	5° 23' 46"	Empangan Air Itam ..	Pulau Pinang Bekalan untuk Kolam Air, Air Itam
100° 14' 13"	5° 26' 50"	Perigi .. ..	Pulau Pinang
100° 14' 23"	5° 26' 46"	Perigi .. ..	Pulau Pinang
100° 14' 35"	5° 26' 49"	Perigi .. ..	Pulau Pinang
			<i>Seberang Perai Tengah</i>
100° 30' 39"	5° 21' 02"	Sg. Chorak Tok/Stesyen Keretapi Bukit Seraya	Seberang Perai Tengah
100° 29' 42"	5° 21' 24"	(i) Sg. Kelang Ubi .. ..	Seberang Perai Tengah
100° 30' 13"	5° 26' 05"	Sg. Kulim .. ..	Seberang Perai Utara
100° 29' 15"	5° 33' 24"	Sg. Muda .. ..	Seberang Perai Utara
100° 29' 52"	5° 22' 33"	Kolam Air Bukit Berapit/Sg. Mengkuang	Seberang Perai Tengah
100° 30' 39"	5° 21' 02"	(ii) Kolam Air CheroK Tok Kun	Seberang Perai Tengah
100° 32' 11"	5° 09' 35"	Kolam Air Bukit Panchor	Seberang Perai Selatan

## (8) The State of Perak

100° 45' 53"	4° 52' 05"	(i) Air Terjun .. ..	-
100° 46' 29"	4° 50' 39"	(ii) Sg. Batu Tugoh .. ..	Taiping
100° 44' 45"	4° 48' 39"	(iii) Sg. Larut .. ..	-
100° 46' 15"	4° 52' 53"	(iv) Sg. Rantin .. ..	-
100° 46' 56"	4° 50' 14"	(v) Sg. Tupai .. ..	-
101° 31' 48"	3° 47' 52"	Sg. Behrang .. ..	Behrang
101° 03' 47"	5° 47' 21"	Sg. Bemban .. ..	Sungai Siput
100° 51' 12"	4° 54' 29"	(i) Sg. Biong .. ..	Sauk
		(ii) Sg. Perah .. ..	-
101° 00' 22"	5° 45' 08"	Sg. Chobang Annak ..	Kroh
100° 53' 19"	4° 45' 31"	Sg. Dal .. ..	Kuala Kangsar
100° 51' 23"	4° 36' 17"	Sg. Guar .. ..	Manong
101° 00' 41"	5° 11' 43"	Sg. Ibul .. ..	Sumpitan
100° 53' 14"	5° 09' 10"	(i) Sg. Ijok .. ..	Ijok
100° 54' 14"	5° 09' 17"	(ii) Sg. Klian Gunong ..	-
100° 45' 12"	4° 53' 49"	Sg. Jana .. ..	Sungai Jana
101° 11' 02"	4° 28' 19"	Sg. Jelintoh .. ..	Gopeng

(8) The State of Perak – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	
Longitude (East)	Latitude (North)		
101° 34' 10"	3° 41' 47"	Sg. Kading .. ..	Tanjong Malim
101° 09' 41"	4° 22' 02"	Sg. Kampar .. ..	Kampar
100° 49' 33"	4° 45' 04"	(i) Sg. Kangsar .. ..	Kuala Kangsar
		(ii) Sg. Kuning .. ..	Baru
101° 07' 27"	4° 25' 33"	Sg. Kendrong .. ..	Grik
101° 09' 58"	4° 20' 17"	Sg. Kinchab .. ..	Kampar
101° 04' 19"	5° 59' 00"	Sg. Kuncha .. ..	Lintang Lasah
100° 49' 52"	4° 54' 25"	Sg. Kurau .. ..	Batu Kurau
101° 10' 39"	4° 42' 49"	(i) Sg. Kinding .. ..	Kinta
101° 12' 04"	4° 40' 06"	(ii) Sg. Kinta .. ..	
101° 15' 48"	4° 17' 17"	Sg. Lah .. ..	Tapah dan Chendering
101° 13' 33"	5° 27' 31"	Sg. Lebey .. ..	Bersia
101° 57' 39"	5° 06' 54"	Sg. Lenggong .. ..	Lenggong
100° 47' 00"	4° 31' 19"	Sg. Lichin .. ..	Bruas
101° 10' 35"	4° 21' 21"	Sg. Palai .. ..	Malim Nawar
101° 06' 00"	4° 28' 40"	Sg. Perak .. ..	Ipoh
100° 54' 57"	4° 29' 17"	Sg. Perak .. ..	Greater Ipoh
100° 49' 23"	5° 14' 47"	Sg. Siputeh (Sg. Bayor)	Sungai Bayor
101° 29' 25"	3° 51' 27"	Sg. Slim .. ..	Kg. Baru Slim
101° 02' 29"	4° 37' 54"	Sg. Tapah .. ..	Sungai Tapah
101° 24' 41"	4° 00' 54"	Sg. Tesong .. ..	Sungai Kiah Sungai
109° 44' 04"	5° 13' 23"	Sg. Torak .. ..	Selama
101° 25' 39"	3° 57' 17"	Sg. Trolak .. ..	Trolak
100° 45' 25"	4° 41' 27"	Sg. Trong .. ..	Matang
101° 21' 45"	4° 12' 56"	Sg. Woh .. ..	Low Perak Baru

(9) The State of Perlis

100° 10' 05"	6° 30' 30"	Sg. Batu Pahat .. ..	Sungai Batu Pahat
100° 08' 25"	6° 26' 12"	Anak Sungai .. ..	Bukit Wei Kuala Perlis
100° 16' 30"	6° 25' 13"	Anak Sungai .. ..	Terusan Utara Guar Sanji
100° 18' 10"	6° 39' 45"	Kolam air Padang Besar	Padang Besar
100° 09' 05"	6° 26' 30"	Perigi .. ..	Wang Besar
100° 10' 10"	6° 32' 50"	Perigi .. ..	Anak Celong
100° 11' 15"	6° 39' 45"	Perigi .. ..	Gua Hantu
100° 16' 15"	6° 25' 15"	Perigi .. ..	Arau
100° 16' 30"	6° 41' 12"	Perigi .. ..	Bukit Mata Air Padang Besar
100° 19' 00"	6° 31' 25"	Perigi .. ..	Felda Chuping

(10) The State of Selangor

101° 48' 06"	3° 09' 42"	Sg. Ampang .. ..	Pengambilan Ampang
101° 40' 06"	3° 27' 54"	Sg. Batang Kali .. ..	Ulu Selangor Selatan

## (10) The State of Selangor - (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)		(2)	(3)
Longitude (East)	Latitude (North)		
101° 04' 48"	3° 43' 48"	Sg. Bernam .. ..	Kg. Tok Khalifah
101° 06' 00"	3° 44' 36"	Sg. Bernam .. ..	Bagan Terap
101° 26' 48"	3° 44' 24"	Sg. Bernam .. ..	Kampong Selisek
101° 31' 06"	3° 11' 42"	Sg. Buloh .. ..	Subang
101° 35' 12"	3° 13' 42"	Sg. Buloh .. ..	Sg. Buloh
101° 33' 12"	3° 05' 00"	Sg. Damansara .. ..	Bukit Jelutong
101° 31' 42"	3° 24' 24"	Sg. Darah .. ..	Sungai Buaya
101° 23' 54"	3° 40' 30"	Sg. Dusun .. ..	Sungai Dusun
101° 41' 30"	3° 36' 42"	Sg. Gerachi .. ..	-
101° 44' 00"	3° 18' 30"	Sg. Gombak .. ..	Gombak
101° 35' 42"	3° 38' 54"	Sg. Inki .. ..	Ulu Selangor Utara
101° 45' 36"	3° 14' 16"	Sg. Klang .. ..	Ampangan Klang Gates
101° 46' 42"	3° 10' 00"	Sg. Kongsilapan .. ..	Takungan Air Ampang
101° 37' 36"	3° 14' 18"	Sg. Kroh .. ..	Kepong
101° 40' 48"	3° 35' 12"	Sg. Kubu .. ..	Kuala Kubu Baru
101° 40' 48"	2° 50' 48"	Sg. Langat .. ..	Bukit Tampoi (Baru)
101° 40' 48"	2° 50' 48"	Sg. Langat .. ..	Bukit Tampoi (Lama)
101° 46' 36"	3° 02' 36"	Sg. Langat .. ..	Cheras
101° 47' 18"	3° 04' 42"	Sg. Langat .. ..	Sg. Langat
101° 38' 06"	2° 57' 36"	Sg. Rasau .. ..	Pulau Meranti
101° 44' 18"	3° 17' 54"	Sg. Rumput .. ..	Sg. Rumput
101° 26' 48"	3° 24' 00"	Sg. Selangor .. ..	Rantau Panjang (Lama)
101° 26' 48"	3° 24' 00"	Sg. Selangor .. ..	Rantau Panjang Loji Pengolahan (Baru)
101° 27' 48"	3° 20' 18"	Sg. Sembah .. ..	Batu Arang
101° 47' 12"	3° 05' 48"	Sg. Serai .. ..	Lembah Ulu Langat
101° 28' 48"	3° 10' 00"	Sg. Subang .. ..	Hummock Utara
101° 25' 30"	3° 37' 30"	Sg. Tenggi .. ..	Sg. Tenggi

## (11) The State of Trengganu

102° 29' 25"	5° 34' 30"	Sg. Bekok .. ..	Tenang (FELDA)
102° 29' 00"	5° 44' 12"	Sg. Besut .. ..	Jerteh
102° 50' 10"	5° 26' 15"	Sg. Chalok .. ..	Chalok (FELDA)
103° 20' 18"	4° 41' 30"	Sg. Dungun .. ..	Bandar Dungun
103° 16' 10"	4° 15' 50"	Sg. Kemaman .. ..	Seberang Tayor
103° 19' 30"	4° 13' 05"	Sg. Kemaman .. ..	Sungai Pinang
103° 19' 18"	4° 32' 26"	Sg. Kerteh .. ..	Rasau Kerteh (sementara)
102° 59' 00"	5° 18' 12"	Sg. Nerus .. ..	Belara (FELDA)
102° 44' 38"	5° 31' 10"	Sg. Setiu .. ..	Kampong Penarik
103° 10' 18"	4° 56' 00"	Sg. Telemboh .. ..	Jerangau
103° 00' 35"	5° 05' 55"	Sg. Trengganu .. ..	Kuala Brang

## (11) The State of Trengganu – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	
Longitude (East)	Latitude (North)		
103° 02' 40"	5° 13' 05"	Sg. Trengganu .. ..	Pulau Babi
103° 05' 45"	5° 18' 48"	Sg. Trengganu .. ..	Pulau Musang
103° 24' 30"	4° 25' 00"	Sg. Tumpat .. ..	Kemasik

## (12) The State of Sarawak

112° 50' 05"	1° 02' 26"	Batang Ai .. ..	Lubok Antu
114° 19' 29"	4° 10' 40"	Batang Baram .. ..	Marudi
114° 24' 43"	3° 45' 56"	Batang Baram .. ..	Long Lama
111° 32' 10"	2° 40' 19"	Batang Jemoreng .. ..	SMK Matu/Daro
112° 08' 11"	2° 23' 55"	Batang Oya .. ..	Nanga Sekuau
112° 09' 34"	2° 05' 07"	Batang Rajang .. ..	SMK Kanowit
112° 56' 37"	2° 01' 08"	Batang Rajang .. ..	Kapit
111° 37' 10"	1° 17' 08"	Batang Sekerang .. ..	Sekerang
111° 31' 00"	1° 08' 14"	Batang Undup .. ..	Simanggang
111° 40' 15"	2° 04' 15"	Sg. Bakong .. ..	SMK Bintang/RTTC
114° 58' 48"	4° 40' 10"	Sg. Berawan .. ..	Limbang
111° 41' 11"	2° 04' 54"	Sg. Binatang .. ..	Binatang
111° 25' 00"	1° 06' 15"	Sg. Dor .. ..	Melugu
115° 00' 16"	4° 41' 34"	Sg. Emoak .. ..	Pandaruan
111° 32' 16"	1° 24' 31"	Sg. Entanak .. ..	Betong
115° 23' 11"	4° 49' 34"	Sg. Gaya .. ..	Lawas
111° 54' 15"	2° 01' 41"	Sg. Julau .. ..	Julau
112° 09' 05"	2° 05' 57"	Sg. Kanowit .. ..	Kanowit
112° 33' 06"	2° 00' 10"	Sg. Katibas .. ..	Song
110° 30' 21"	1° 05' 53"	Sg. Kayan .. ..	Tebakang
113° 55' 44"	4° 06' 26"	Sg. Kejapil .. ..	Bekenu
114° 02' 06"	4° 18' 18"	Sg. Liku .. ..	Miri
110° 47' 06"	1° 22' 03"	Sg. Malanjok .. ..	Simunjan
111° 37' 30"	2° 03' 42"	Sg. Maradong .. ..	Maradong
111° 38' 13"	1° 07' 53"	Sg. Marup .. ..	Engkilili
113° 45' 03"	3° 48' 00"	Sg. Niah .. ..	SMK Subis
111° 27' 41"	2° 01' 18"	Sg. Paoh .. ..	SMK Sarikei
112° 03' 47"	2° 18' 14"	Sg. Pasai .. ..	SMK Sibu Pendalaman
112° 04' 19"	2° 52' 26"	Sg. Petanek .. ..	Mukah
110° 34' 45"	1° 08' 29"	Sg. Ranchan .. ..	Serian
110° 19' 03"	1° 43' 44"	Sg. Sabun .. ..	Santubong
111° 30' 05"	2° 01' 34"	Sg. Sarikei .. ..	Sarikei
109° 47' 44"	1° 47' 41"	Sg. Sebat Besar .. ..	Sematan
109° 50' 32"	1° 41' 13"	Sg. Sebemban .. ..	Lundu
111° 19' 34"	1° 47' 15"	Sg. Sebetan .. ..	Saratok
111° 17' 52"	1° 53' 07"	Sg. Seblak .. ..	Roban
110° 07' 53"	1° 24' 16"	Sg. Seburan .. ..	SMK Tasek Bau

## (12) The State of Sarawak – (cont.)

Location of Water Intake		Name of River/Reservoir/Well	Water Supply Scheme
(1)	(2)	(3)	(3)
Longitude (East)	Latitude (North)		
112° 05' 49"	2° 19' 54"	Sg. Sibintek .. ..	Sibintek
113° 05' 59"	3° 11' 57"	Sg. Sibiu .. ..	Bintulu
110° 11' 56"	1° 26' 52"	Sg. Siniawan .. ..	Siniawan
110° 37' 08"	1° 08' 03"	Sg. Sinyaru .. ..	Triboh
112° 32' 24"	2° 56' 17"	Sg. Suyong .. ..	Balingian
110° 24' 04"	1° 17' 28"	Sg. Tapah .. ..	Tapah/Beratok
111° 57' 00"	2° 45' 07"	Sg. Ud .. ..	Dalat
111° 24' 45"	1° 33' 54"	Tadahan Paya .. ..	SMK Debak

## (13) The State of Sabah

116° 20' 17"	05° 25' 15"	Sg. Baiays .. ..	Bingkor
116° 45' 00"	06° 28' 00"	Sg. Bandau .. ..	Kota Marudu
118° 19' 48"	05° 01' 38"	Sg. Edam .. ..	Lahad Datu
118° 19' 45"	04° 25' 17"	Sg. Gading-gading .. ..	Semporna
118° 04' 45"	05° 51' 18"	Sg. Kebun China .. ..	Sandakan
116° 33' 28"	06° 32' 00"	Sg. Kukut .. ..	Timbang Mengaris
115° 34' 43"	05° 06' 25"	Sg. Lakutan .. ..	Sipitang/Mesapol
115° 57' 24"	05° 07' 00"	Sg. Langut .. ..	Tenom
116° 09' 00"	05° 19' 18"	Sg. Liawan .. ..	Keningau
116° 38' 40"	05° 57' 08"	Sg. Liwagu .. ..	Ranau
115° 37' 30"	05° 11' 55"	Sg. Lingkungan .. ..	Weston/Lingkungan
118° 27' 45"	04° 25' 26"	Sg. Luran .. ..	Semporna
118° 24' 45"	04° 22' 50"	(i) Sg. Mantarilip .. ..	Semporna
118° 25' 45"	04° 23' 47"	(ii) Sg. Mantarilip .. ..	Semporna
117° 33' 04"	05° 50' 07"	Sg. Moynod .. ..	Beluran
116° 06' 35"	05° 54' 53"	(i) Sg. Moyog (Lama) .. ..	Kota Kinabalu
116° 09' 28"	05° 55' 20"	(ii) Sg. Moyog (Baru) .. ..	-
115° 47' 50"	05° 28' 15"	Sg. Membakut .. ..	Membakut
115° 46' 00"	05° 20' 38"	Sg. Padas .. ..	Beaufort
115° 57' 23"	05° 42' 52"	Sg. Papar .. ..	Papar
116° 25' 18"	05° 02' 00"	Sg. Penawan .. ..	Nabawan
116° 34' 30"	06° 00' 30"	Sg. Romowanan .. ..	Kundasang
118° 16' 48"	05° 00' 54"	Sg. Sepagaya .. ..	Lahad Datu
118° 03' 08"	05° 51' 30"	Sg. Sibuga .. ..	Sandakan
117° 53' 53"	04° 15' 25"	Sg. Tawau .. ..	Tawau (Lama)
117° 52' 50"	04° 16' 52"	Sg. Tawau .. ..	Tawau (Baru)
116° 20' 17"	05° 40' 30"	Sg. Tandular .. ..	Tambunan
116° 06' 15"	05° 37' 55"	Sg. Telupid .. ..	Telupid
116° 15' 58"	06° 08' 00"	Sg. Tuaran .. ..	Tamparuli
116° 13' 44"	06° 10' 23"	Sg. Tuaran .. ..	Tuaran
116° 48' 05"	06° 56' 20"	Kolam Air Penangsoo .. ..	Kudat
118° 14' 40"	04° 42' 05"	Matair Kunak .. ..	Kunak

(13) The State of Sabah – (cont.)

<i>Location of Water Intake</i>		<i>Name of River/ Reservoir/Well</i>	<i>Water Supply Scheme</i>
(1)	(2)	(3)	
<i>Longitude (East)</i>	<i>Latitude (North)</i>		
115° 34' 20"	05° 30' 00"	Lubang Korek . . . .	Kuala Penyu
Di kawasan tadahan Kabun China		Lubang Korek . . . .	Sandakan (Bawah Tanah)
Kawasan Lapangan Terbang Labuan		Lubang Korek . . . .	Labuan
116° 25' 50"	06° 21' 25"	Perigi . . . .	Kota Belud

FIFTH SCHEDULE

*ENVIRONMENTAL QUALITY ACT, 1974*

**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS, 1979**

[Regulation 8 (4)]

**LIST OF PARAMETERS THE LIMITS OF WHICH TO BE SPECIFIED**

- (i) Ammoniacal Nitrogen
- (ii) Sulphate
- (iii) Chloride
- (iv) Cobalt
- (v) Colour
- (vi) Detergents, Anionic
- (vii) Fluoride (as F)
- (viii) Molybdenum
- (ix) Nitrate Nitrogen
- (x) Phosphate (as P)
- (xi) Polychlorinated Biphenyls
- (xii) Selenium
- (xiii) Silver
- (xiv) Beryllium
- (xv) Vanadium
- (xvi) Radioactive Material
- (xvii) Pesticides, fungicides, herbicides, insecticides, rodenticides, fumigants or any other biocides or any other chlorinated hydrocarbons
- (xviii) A substance that either by itself or in combination or by reaction with other waste or refuse may give rise to any gas, fume or odour or substance which causes or is likely to cause pollution.



**SIXTH SCHEDULE**  
**ENVIRONMENTAL QUALITY ACT, 1974**

**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS, 1979**

[Regulation 11 (5) (b)]

**PARAMETER LIMITS OF EFFLUENT OTHER THAN OF STANDARD A OR B**

<i>Parameter</i>	<i>Unit</i>	<i>Limit</i>
(i) Temperature .. .. .	°C	45
(ii) pH Value .. .. .	-	5.0-9.0
(iii) BOD <sub>5</sub> at 20°C .. .. .	mg/l	400
(iv) COD .. .. .	mg/l	1000
(v) Suspended Solids .. .. .	mg/l	400
(vi) Mercury .. .. .	mg/l	0.10
(vii) Cadmium .. .. .	mg/l	1.0
(viii) Chromium, Hexavalent .. .. .	mg/l	2.0
(ix) Arsenic .. .. .	mg/l	2.0
(x) Cyanide .. .. .	mg/l	2.0
(xi) Lead .. .. .	mg/l	2.0
(xii) Chromium, Trivalent .. .. .	mg/l	10
(xiii) Copper .. .. .	mg/l	10
(xiv) Manganese .. .. .	mg/l	10
(xv) Nickel .. .. .	mg/l	10
(xvi) Tin .. .. .	mg/l	10
(xvii) Zinc .. .. .	mg/l	10
(xviii) Iron (Fe) .. .. .	mg/l	50
(xix) Phenol .. .. .	mg/l	5.0
(xx) Sulphide .. .. .	mg/l	2.0
(xxi) Oil and Grease .. .. .	mg/l	100

**SEVENTH SCHEDULE**  
**ENVIRONMENTAL QUALITY ACT, 1974**

**ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL EFFLUENTS) REGULATIONS, 1979**

[Regulation 22 (1)]

**METHOD OF COMPUTING EFFLUENT-RELATED LICENCE FEE**

1. The amount of effluent-related licence fee shall be subject to—
  - (1) the total amount of organic loading determined as the total biochemical oxygen demand (BOD<sub>5</sub> at 20°C) of the effluent expressed in metric ton (tonne);
  - (2) the total amount of toxicity determined as the total amount of contaminants, listed as parameters (vi) to (xvi) in the Third Schedule and parameters (xi) to (xviii) listed in the Fifth Schedule, present in the effluent expressed in kilograms (kg); and

(3) the total amount of other toxicity determined as the total amount of contaminants, listed as parameters (xvii) to (xxiii) in the Third Schedule and any other parameters the Director-General thinks fit present in the effluent expressed in kilograms (kg).

2. The licence fee shall be computed in accordance with paragraph 1 of this schedule as follows:

<i>Inland Waters into which effluent is discharged</i>	<i>FEE</i>		
	<i>per tonne of BOD load specified in sub-paragraph 1 (1)</i>	<i>per kg of contaminants specified in sub-paragraph 1 (2)</i>	<i>per kg of contaminants specified in sub-paragraph 1 (3)</i>
(a) Inland waters specified in regulation 8 (1) (a) .. ..	\$100.00	\$500.00	\$100.00
(b) Any other inland waters ..	\$ 10.00	\$ 50.00	\$ 10.00

Made the 1st January, 1979.

TAN SRI ONG KEE HUI,  
*Minister of Science, Technology  
and Environment*