ENVIRONMENTAL QUALITY (SEWAGE AND INDUSTRIAL 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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"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

Parameter	*Unit*	*Standard*	
		A	*B*
(1)	(2)	(3)	(4)
(i) Temperature	°C	40	40
(ii) pH Value	–	6.0-9.0	5.5-9.0
(iii) BOD_5 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

ENVIROMENTAL 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

Location of Water Intake		*Name of River/ Reservoir/Well*	*Water Supply Scheme*
(1)		(2)	(3)
Longitude (East)	*Latitude (North)*		
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. Benut	Simpang Renggam
103° 03′ 42″	2° 22′ 48″	Sg. Gatom	Labis (Lama)
104° 03′ 42″	1° 53′ 24″	Sg. Gembot	Telok Mahkota/Kuala Sedili
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 Serambang
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	Khuang 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 Pulai Besar)	–
102° 42′ 00″	2° 07′ 20″	Imp. Reservoir	Pengkalan Bukit (Muar)
102° 56′ 35″	1° 48′ 50″	Imp. Reservoir	Bukit Banang (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)
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 (1)		*Name of River/ Reservoir/Well* (2)	*Water Supply Scheme* (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 (Jelebu)
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 Tiong 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)
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	Kampong 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	Pulai 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.)

Location of Water Intake		*Name of River/ Reservoir/Well*	*Water Supply Scheme*
(1)		(2)	(3)
Longitude (East)	*Latitude (North)*		
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)
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
			Seberang Perai Tengah
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. Kinchap	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 Klah Sungkai
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. Kongsi Lapan ..	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. Tengi	Sg. Tengi

(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)
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/Lingungan
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.)

Location of Water Intake		*Name of River/ Reservoir/Well*	*Water Supply Scheme*
(1)		(2)	(3)
Longitude (East)	*Latitude (North)*		
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

Parameter	*Unit*	*Limit*
(i) Temperature	°C	45
(ii) pH Value	–	5.0-9.0
(iii) BOD_5 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_5 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 kilogrammes (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:

Inland Waters into which effluent is discharged	*FEE*		
	per tonne of BOD load specified in sub-paragraph 1 (1)	*per kg of contaminants specified in sub-paragraph* 1 (2)	*per kg of contaminants specified in sub-paragraph* 1 (3)
(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