GUIDELINES FOR THE APPLICATION OF SPECIAL MANAGEMENT OF SCHEDULED WASTE

INTRODUCTION

1. Under Regulation 7 (1), Environmental Quality (Scheduled Waste) Regulation 2005, a waste generator may apply to the Director General, in writing, to exclude the scheduled wastes generated from their particular facility or process from being treated, disposed of or recovered at the prescribed premises.

2. The general requirements for the application are described in these guidelines.

INFORMATION REQUIRED

3. In order for the application to be considered, scheduled waste generators must demonstrate that the waste meet all the following conditions:

   i) Does not exhibit any of the hazardous characteristics - corrosivity, ignitability, reactivity, and toxicity, as defined in **Appendix I**; and

   ii) Has been proven by scientific studies or tests on its toxicity and carcinogenicity and does not have hazardous effects on human or other life forms as specified in **Appendix II**, in concentration which is equal to, or exceeds the percentage limits (percentage weights) specified in **Appendix III**. A generator/ applicant shall submit reports, records or journals in order to prove that the waste does not exhibit any of the elements mentioned.

4. The applicant shall provide the information as required in AS WM 1/2005 form together with processing fee of RM 300.00 which is not refundable (**Appendix IV**)

Appendix I

HAZARDOUS CHARATERISTIC OF WASTE

It is the responsibility of the waste generator to determine whether the waste exhibits one or more of the following characteristics of hazardous and/or toxicity:

Corrosivity.

A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either one of the following properties:

(1) It has an aqueous component and has a pH less than or equal to 2, or greater than or equal to 12.5, as determined by an approved / calibrated pH meter.

(2) It has a liquid component and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55^{o}C (130^{o}F).

Ignitability.

A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) If it is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, it has flash point less than 60^{o}C (140^{o}F), as determined by a Pensky-Martens Closed Cup Tester or a Setaflash Closed Cup Tester.

(2) If it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates hazard.

(3) It is an ignitable compressed gas.

(4) It is an oxidizer.

Reactivity.

A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent changes without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(6) It is capable of detonation or explosion if subjected to a strong initiating source or if heated under confinement.

(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

Toxicity

A waste exhibits the characteristic of toxicity if, the extract from a representative sample of the waste contains any of the contaminants listed in **Table 1** and **Table 2** at the concentration equal to or greater than the respective value given in that table.

Table 1. Maximum Concentration of Contaminants for the Toxicity Characteristic Leaching Procedure (TCLP).

DOE CW No. [1]	Contaminant	CAS No. [2]	Maximum Level (mg/L)
C004	Arsenic	7440-38-2	5.0
C005	Barium	7440-39-3	100.0
C018	Benzene	71-43-2	0.5
C006	Cadmium	7440-43-9	1.0
C019	Carbon tetrachloride	56-23-5	0.5
C020	Chlordane	57-74-9	0.03
C021	Chlorobenzene	108-90-7	100.0
C022	Chloroform	67-66-3	6.0
C007	Chromium	7440-47-3	5.0
C023	o-Cresol	95-48-7	200.0[3]
C024	m-Cresol	108-39-4	200.0[3]
C025	p-Cresol	106-44-5	200.0[3]

…continued, Table 1

C026	Cresol		200.0[3]
C016	2,4-D	94-75-7	10.0
C027	1,4-Dichlorobenzene	106-46-7	7.5
C028	1,2-Dichloroethane	107-06-2	0.5
C029	1,1-Dichloroethylene	75-35-4	0.7
C030	2,4-Dinitrotoluene	121-14-2	0.13
C012	Endrin	72-20-8	0.02
C031	Heptachlor (and its epoxide)	76-44-8	0.008
C032	Hexachlorobenzene	118-74-1	0.13
C033	Hexachlorobutadiene	87-68-3	0.5
C034	Hexachloroethane	67-72-1	3.0
C008	Lead	7439-92-1	5.0
C013	Lindane	58-89-9	0.4
C009	Mercury	7439-97-6	0.2
C014	Methoxychlor	72-43-5	10.0
C035	Methyl ethyl ketone	78-93-3	200.0
C036	Nitrobenzene	98-95-3	2.0
C037	Pentrachlorophenol	87-86-5	100.0
C038	Pyridine	110-86-1	5.0
C010	Selenium	7782-49-2	1.0
C011	Silver	7440-22-4	5.0
C039	Tetrachloroethylene	127-18-4	0.7
C015	Toxaphene	8001-35-2	0.5
C040	Trichloroethylene	79-01-6	0.5
C041	2,4,5-Trichlorophenol	95-95-4	400.0
C042	2,4,6-Trichlorophenol	88-06-2	2.0
C017	2,4,5-TP (Silvex)	93-72-1	1.0
C043	Vinyl chloride	75-01-4	0.2

FOOTNOTE: [1]Characteristic waste number.
[2]Chemical abstracts service number.
[3]If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

Table 2 : Compositional Analysis (Dry Basis)

	TTLC mg/kg	STLC mg/L
Metals		
Antimony (Sb)	500	15
Arsenic (As)	500	5
Barium (Ba)	10000	100
Berylium (Be)	75	0.75
Cadmium (Cd)	100	1
Chromium (Cr)	2500	5
Chromium-VI (CrVI)	500	5
Cobalt (Co)	8000	80
Copper (Cu)	2500	25
Lead (Pb)	1000	5
Mercury (Hg)	20	0.2
Molybdenum (Mo)	3500	350
Nickel (Ni)	2000	20
Selenium (Se)	100	1
Silver (Ag)	500	5
Thallium (TI)	700	7
Vanadium (V)	2400	24
Zinc (Zn)	5000	250
Semivolatile Organics		
Pentachlorophenol	17	1.7
Herbicides		
2,4-Dichlorophenoxy acetic acid	100	10
2,4,5-Trichlorophenoxypropionic acid (Silvex)	10	1
Volatile Organics		
Trichloroethylene	2040	204
Pesticides and PCBs		
Aldrin	1.4	0.14
Chlordane	2.5	0.25
DDT, DDE, DDD	1	0.1
Dieldrin	8	0.8
Endrin	0.2	0.02
Heptachlor	4.7	0.47
Kepone	21	2.1
Lindane	4	0.4

Methoxychlor	100	10
Mirex	21	2.1
PCBs	50	5
Toxaphene	5	0.5

Miscellaneous

Asbestos	1%	
Dioxin (2,3,7,8-TCDD)	0.1	0.1
Fluran (2,3,7,8-TCDF)	0.1	0.1
Fluoride salts	18000	180
Organic Lead	13	

FOOT NOTE :
STLC : Soluble Threshold Limit Concentration
TTLC : Total Threshold Limit Concentration

METHOD OF SAMPLING AND EXAMINATION
The method of sampling and examination shall be in accordance with the “Test Method For Evaluat ing Solid Waste, Physical/Chemical Methods”, USEPA Publication SW -846, Third Edition and updates.

Appendix II

PROPERTIES OF WASTES WHICH RENDER THEM HAZARDOUS

Waste is regarded as hazardous if it demonstrates one or more of the following properties. If the waste contains a mixture with one or more chemical substances which demonstrate these properties, evaluation shall take into account the total content of these substances, as specified in **Appendix II.**

Fire hazard	**1. Explosive** : solid, liquid, paste-like, or gelatinous substances or products which, without the effect of flame, can react to produce violent generation of heat with rapid generation of gas, and which under specific test conditions detonate and rapidly deflagrate , or when heated inpart confinement, explode.
	2. Oxidising : Substances or products which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances.
	3. Flammable : Substances or products (including those which are extremely flammable and highly flammable) which: ♦ Become hot and finally catch fire in contact with air at ambient temperature without any application of energy; or ♦ In solid form may readily catch fire after brief contact with a source of ignition and which continue to burn or be consumed after the removal of the source of ignition; or ♦ In liquid form have a flash point of lower than 0 ^{o}C and a boiling point lower than or equals to 35 ^{o}C (**extremely flammable**) ; a flash point below 21^{o}C (**highly flammable**); a flash point equals to or greater than 21^{o}C and less than or equals to 55 ^{o}C (**flammable**); or ♦ In contact with water or damp air evolve highly flammable gases in dangerous quantities, or
Health hazard	**4. Very toxic**: Substances or products which : ♦ If they are inhaled or ingested, or if they penetrate the skin may involve extremely serious, acute or chronic health risks or even death; or ♦ The LD50 absorbed orally in rat is less than 25 mg/kg or the LD -50 percutaneous absorption in rat or rabbit is les s than 50 mg/kg or the LC-50 absorbed by inhalation in rat is less than 0.5 mg/liter (administered for a minimum period of four hours)

	5. Toxic: Substances or products which : ♦ If they are inhaled or ingested, or if they penetrate the skin may involve serious, acute or chronic health risks or even death; or ♦ The LD50 absorbed orally in rat is between 25 to 200 mg/kg or the LD-50 percutaneous absorption in rat or rabbit is between 50 to 400 mg/kg or the LC-50 absorbed by inhalation in rat is between 0.5 to 2 mg/liter (administered for a minimum period of four hours)
	6. Harmful : Substances or products which: ♦ if they are inhaled or ingested, or if they penetrate the skin may involve limited health risks; or ♦ The LD50 absorbed orally in rat is between 200 to 500 mg/kg or the LD-50 percutaneous absorption in rat or rabbit is between 400 to 2000 mg/kg or the LC-50 absorbed by inhalation in rat is between 2 to 20 mg/liter (administered for a minimum period of four hours)
	7. Corrosive: Substances or products which may destroy living tissue on contact.
	8. Irritant : Substances or products which, without being corrosive, may cause inflammation through immediate, prolonged or repeated contact with the skin or mucous membrane.
	9. Carcinogenic: Substances or products which if they are inhaled or ingested, or if they penetrate the skin, may induce cancer or increases its incidence.
Harmful to the environment	**10. Ecotoxic:** Substances or products which present, or may present immediate or delayed risks for one or more segment of the environment.
Infectious	**11. Infectious**: Substances containing micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.

Method of examination

In testing for characteristics 1 to 11, the method of examination used shall be as stated in the following European Community (EC) Directives:

i. Council Directive 87/302/European Economic Commission (EEC) [1] for toxicity and ecotoxicity tests;
ii. Council Directive 92/69/EEC [2] for physical, chemical, toxicity and ecotoxiciy tests; and
iii. Council Directive 96/54/EC [3] for toxicity and health effects tests.

[1] Official Journal (OJ) No. L133 30/5/1998
[2] OJ No. L383 29/12/1992
[3] OJ No. L248 30/9/1996

Appendix III

Percentage limits which render waste hazardous

Waste is hazardous under all circumstances if:

- The sum of the composite, or one or more chemical substance(s) which exhibit the characteristics specified in the **Appendix III** amounts to a concentration which is equal to, or exceeds, the following percentage limits (percentage weights):

Characteristic	%
Highly toxic (R26, R27, R28, R39)[1])	0.1
Toxic (R23, R24, R25)[1])	3
Toxic (R48, R39)[1])	1
Health hazard (R20, R21, R22)[1])	25
Health hazard (R48)[1])	10
Corrosive (R35)[1])	1
Corrosive (R34)[1])	5
Irritant (R36, R37, R38)[1])	20
Irritant (R41)[1])	5
Carcinogenic, category 1 or 2 (R45, R49)[1])	0.1[2])
Carcinogenic, category 3 (R40)[1])	1[2])
Mutagenic, category 1 or 2 (R46)[1])	0.1[2])
Mutagenic, category 3 (R40)[1])	1[2])

[1]) Refer to the Department of Occupational Safety and Health's prevailing regulations on Classification, Packaging and Labelling of Hazardous Chemicals, namely the Occupational Safety And Health (Classification, Packaging And Labelling Of Hazardous Chemicals) Regulations 1997 or EC Council Directive 91/689/EEC.

[2]) Concentration limits apply to individual chemical substances with the relevant characteristics.

SINGLE RISK PHRASES

Risk Phrase Reference No.	Risk Phrase
R1	Explosive when dry
R2	Risk of explosion by shock, fire or other sources of ignition
R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition
R4	Forms very sensitive explosive metallic compounds
R5	Heating may cause an explosion
R6	Explosive with or without contact with air
R7	May cause fire
R8	Contact with combustible material may cause fire
R9	Explosive when mixed with combustible materials
R10	Flammable
R11	Highly flammable
R12	Extremely flammable
R13	Extremely flammable liquefied gas

…continued, Appendix III

R14	Reacts violently with water
R15	Contact with water liberates highly flammable gases
R16	Explosive when mixed with oxidizing substances
R17	Spontaneously flammable in air
R18	In use, may form flammable/explosive vapour -air mixture
R19	May form explosive peroxides
R20	Harmful by inhalation
R21	Harmful in contact with skin
R22	Harmful if swallowed
R23	Toxic by inhalation
R24	Toxic in contact with skin
R25	Toxic if swallowed
R26	Very toxic by inhalation
R27	Very toxic in contact with skin
R28	Very toxic if swallowed
R29	Contact with water liberates toxic gas
R30	Can become highly flammable in use
R31	Contact with acids liberates toxic gas
R32	Contact with acids liberates very toxic gas
R33	Danger of cumulative effects
R34	Causes burns
R35	Causes severe burns
R36	Irritating to eyes
R37	Irritating to respiratory system
R38	Irritating to skin
R39	Danger of very serious irreversible effects
R40	Possible risk of irreversible effects
R41	Risk of serious damage to eyes
R42	May cause sensitisation by inhalation
R43	May cause sensitisation by skin contact
R44	Risk of explosion if heated under confinement
R45	May cause cancer
R46	May cause heritable genetic damage
R47	May cause birth defects
R48	Danger of serious damage to health by prolonged exposure
R49	May cause cancer by inhalation
R50	Very toxic to aquatic organisms
R51	Toxic to aquatic organisms
R52	Harmful to aquatic organisms
R53	May cause long-term adverse effects in the aquatic environment
R54	Toxic to flora
R55	Toxic to fauna
R56	Toxic to soil organisms
R57	Toxic to bees
R58	May cause long-term adverse effects in the environment
R59	Dangerous for the ozone layer

Appendix IV

(AS. WM-1/2005)

PERMOHONAN UNTUK PENGURUSAN KHAS BUANGAN TERJADUAL DI BAWAH PERATURAN 7, PERATURAN - PERATURAN KUALITI ALAM SEKELILING (BUANGAN TERJADUAL) 20 05
APPLICATION FOR SPECIAL MANAGEMENT OF SCHEDULED WASTE UNDER REGULATION 7, ENVIRONMENTAL QUALITY (SCHEDULED WASTES) REGULATIONS 200 5

A. PENGENALAN
IDENTIFICATION

1. (i) Nama Pemohon:
Name of Applicant

(ii) Alamat Pemohon:
Address of Applicant

(iii) Telefon:
Telephone

(iv) Telefaks:
Telefax

(v) E-mail :

2. (i) Nama Premis:
Name of Premises

(ii) Alamat Premis:
Address of Premises

(iii) Telefon:
Telephone

(iv) Telefaks:
Telefax

(v) E-mail :

B. MAKLUMAT OPERASI
OPERATIONAL INFORMATION

3. Justifikasi permohonan
Justification for application

4. Lampirkan senarai bahan-bahan mentah dan kuantiti yang digunakan setiap bulan
Attach list of main raw materials and the quantity used permonth.

5. Lampirkan senarai hasil dan kuantiti pengeluaran setiap bulan
Attach list of final products and quantity produced per month

6. Lampirkan keterangan proses pengeluaran dan rajah aliran yang berkaitan
Attach description of production processes and the relevant flow diagrams

7. Penjelasan samaada buangan terjadual dihasilkan daripada proses perkilangan atau proses loji pengolahan air buangan, pemprosesan bahan, operasi pengurusan buangan dan lain -lain operasi yang boleh menyumbang kepada terhasilnya buangan terjadual.
Clarify whether the scheduled waste is generated from manufacturing process or wastewater treatment process, process materials, waste management operations and other operations that might contribute to the scheduled waste generation.

C. PENGURUSAN BUANGAN TERJADUAL YANG DIPOHON
MANAGEMENT OF SCHEDULED WASTE CONCERNED

8. Keterangan mengenai buangan terjadual yang dipohon untuk pengurusan khas , kategori dan kuantiti buangan terjadual
Description of the specific scheduled waste applied for the special management, scheduled waste category and quantity

9. Maklumat penghasilan buangan terjadual (Tiga tahun terakhir)
Information on scheduled waste generation (last three years)

10. Jumlah buangan – purata dan jumlah maksimum buangan yang dihasilkan mengikut bulan atau tahun.
Waste volume-average and maximum volume of waste generated monthly or annually.

11. Kaedah pelupusan buangan terjadual (Tiga tahun terakhir)
Waste disposal method (Last three years)

12. Huraian terperinci cadangan bagaimana buangan terjadual akan diuruskan
Describe in detail on how the scheduled waste will be managed

D. PENYENARAIAN SEMUA BAHAN BERBAHAYA
LIST OF ALL HAZARDOUS CONSTITUENTS

13. Menjalankan analisis bagi mengenalpasti sebarang bahan kimia berbahaya yang mungkin wujud dalam buangan
Conduct an analysis to identify any hazardous constituents that may be present in the waste.

14. Mengenalpasti mana-mana bahan yang mana kajian terperinci akan dijalankan berdasarkan kepada senarai
Identify constituents for which detail testing would be conducted, based on the list.

E. KAWALAN KUALITI
QUALITY CONTROL

15. Huraian program kawalan kualiti bagi kedua-dua aktiviti persampelan di lapangan dan penganalisaan makmal.
Description of quality control program for both field sampling and laboratory analysis.

F. MAKLUMAT PERSAMPELAN BUANGAN
WASTE SAMPLING INFORMATION

16. Teknik pengendalian dan penyediaan yang digunakan bagi setiap sampel dan jenis dan jumlah pengawet yang digunakan.
Handling and preparation techniques used for each sample and types and amounts of preservatives used.

G. MAKLUMAT ANALISIS BUANGAN
WASTE ANALYSIS INFORMATION

17. Samaada pengambilan sampel mewakili buangan terjadual yang berubah atau seragam
Whether collected samples represent the variability or uniformity of the scheduled waste.

18. Persampelan dijalankan oleh orang yang berkelayakan dan berkecuali
Waste sampling was conducted by qualified and independent personnel.

H. BAYARAN
FEE

20. Bayaran memproses: RM300.00
Processing Fee

21. Disertakan Kiriman Wang/Wang Pos/Bank Draf bernombor : _____ berjumlah RM 300.00 untuk bayaran memproses
Enclosed Money Order/Postal Order/Bank Draft number : _____ of RM 300.00 for the processing fee

Saya, dengan ini mengaku bahawa segala maklumat yang diberi dalam permohonan ini adalah benar dan betul sepanjang pengetahuan dan kepercayaan saya.
I, hereby declare that all information given in this application is to the best of my knowledge and belief true and correct

Tandatangan:
Signature:

Nama:
Name:

Jawatan:
Designation:

Pengesahan:
Certified Stamp:

Tarikh:
Date: