REFERENCE OF TENDER	DESCRIPTION OF TENDER	TIME PERIOD OF TENDER	DEPARTMENT/DIVISION/ UNIT REQUESTING TENDER	FEES	CLOSING DATE NOT LATER THAN 2.00PM	FOCAL PERSON
KK/357/2022/ESTETRIPASH(TC)	DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, COLLECTION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS **Eligibility For Tenderers**: Registered with Ministry of Health OR Ministry of Development **Class:** II above	3 YEARS	RIPAS HOSPITAL	$500.00	24th JANUARY 2023	IR Abdul Mushawwir Bin Haji Abdul Rahman Jurutera Kanan Hospital Hospital Raja Isteri Pengiran Anak Saleha Negara Brunei Darussalam Contact No.: 2242424 EXT 8637/8640/2222 e-mail: mushawwir.rahman@moh.gov.bn

GENERAL AND PRELIMINARIES

1.0 GENERAL

1.1 RELATED DOCUMENTS

This particular specification shall be read in conjunction with other documents listed below forming part of this contract and shall be supplementary to the "PWD GENERAL SPECIFICATION FOR BUILDING AND CONSTRUCTION WORKS" (Revised 1988) unless specified herein.

OTHER DOCUMENTS
(a) General Conditions of Contract
(b) Summary of Tender
(c) Tender Form
(d) Letter of Acceptance
(e) Drawings

Discrepancies in any of these documents, if any, shall be referred to the Superintending Officer (S.O.), whose decision as to which document shall take precedence shall be final.

2.0 SCOPE OF WORKS

2.1 A brief description of the works involved in this contract is given in the Summary **of Bill of Quantities** of the tender document. It is however understood by the Contractor that he is solely and fully responsible for investigating and ascertaining the actual extent and nature of all works included in this contract prior to submission of this tender. Any doubt as to the actual extent or nature of the works shall be referred to the S.O. for clarification before submission of tender. The Government shall not entertain any claim resulting from lack of clarity or non-availability of information.

2.2 Allowance for any and all contingency on account of this provision shall be allowed in the tender.

3.0 DEFINITION AND UNITS OF MEASUREMENT

3.1 Definition

In the Contract the following works and expression (other than those terms already defined in the form of Contract) shall have the meanings hereby assigned to them where the contract otherwise requires:
"**Permanent Works**" means the works to be constructed, completed and maintained in accordance with the contract.
"**Temporary Works**" means all temporary works of every kind required in or around the construction, completion and maintenance of the works and removal on completion of project.
"**Construction Plant**" means all appliances or things of whatsoever nature required in or around the construction, completion and maintenance of the works but does not include materials or other things intended to form or forming a part of the permanent works.

3.2 Units of Measurement
All units of measurement used in this specification and in the schedule of rates shall be in accordance with the **metric system** unless otherwise stated.

4.0 INSPECTION OF SITE

4.1 The Contractor shall be deemed to have inspected and examined the site and surroundings and to have satisfied himself before submitting his tender as to the nature of the ground and subsoil if any so far as it is practicable and having taken into account any information in connection therewith which may have been provided by or on behalf of the Government the form and nature of the site the extent and nature of the work and materials necessary for completion of the works the means of communication with the access to the site the accommodation he may require and in general to have obtained for himself all necessary information (subject as above mentioned) as to risks contingencies and all other circumstances influencing or affecting his tender.
The Contractor shall submit a **Site Visit Form** and this form shall be attached and submitted together with his tender.

5.0 SUFFIENCY OF TENDER

5.1 The Contractor shall be deemed to have satisfied himself before submitting his tender as to the correctness and sufficiency of the rates and prices stated by him in the priced Summary of Tender which shall (except in so far as it is otherwise provided in the contract) cover all his obligations under the contract.

6.0 TENDER DOCUMENTS AND SITE CONDITIONS

6.1 The tenderer shall be deemed to have read and understood the tender documents and have thoroughly acquainted himself with site conditions and nay items or contingency likely to affect his tender prices before tendering. No claims, monetary or otherwise, made by the Contractor on the grounds of lack of knowledge of any or all of the aforementioned matter shall be entertained.

7.0 MAILING ADDRESS AND TELEPHONE

7.1 The Contractor shall provide the S.O. with mailing address and telephone number in Brunei Darussalam. All letters, written instructions etc, posted by ordinary mail to the mailing address shall be deemed to have been issued to the Contractor.

8.0 CONTRACTOR TO REPORT TO THE S.O

8.1 The Contractor or his authorized representative, conversant with the works involved and able to communicate effectively in Malay or English shall report to Estate Maintenance Unit, RIPAS Hospital, Bandar Seri Begawan, on receipts of telephone calls, within one working day, to receive verbal or written instruction etc. with respect to schedule or quality of work.

9.0 CONTRACTOR'S SITE ENGINEER / PROJECT ENGINEER

9.1 At all times during the progress of the Works the Contractor shall employ suitably qualified site engineer/project engineer with at least 5 years experience on construction management and in work related to this contract. The site engineer/project engineer shall be able to organize and control all aspects of the works and shall be able to communicate effectively in Malay or English. The site engineer/project engineer shall comply with all instructions of the S.O or his authorized representatives.

9.2 The Contractor shall submit to the S.O prior to the beginning of the contract his engineer's full C.V. with authorization from the Contractor to receive and carry out the instruction of the S.O. at any time.

10.0 PLANNING AND PROGRAMMES OF WORKS

10.1 Programme to be furnished

Within 14 days after the acceptance of his tender the Contractor shall submit to the S.O. for his approval a programme of works in an approved form of network analysis showing the procedure in which he proposes to carry put the works and thereafter shall furnish such further details and information as the S.O. may reasonably require in regard thereto. The programme shall include provisions for ordering and delivery period of materials, machine and equipment to be employed, method and sequence of works to be carried out, etc. The Contractor shall at the same time provide in writing for the information of the S.O. a general description of the arrangements and methods of construction which the Contractor proposes to adopt for carrying out the works. Once the programme has been approved by the S.O., the Contractor shall take all steps necessary to ensure that the works are carried out in accordance with the method and sequence outline in the programme.

10.2 Revision of Programme

Should it appear to the S.O. at any time that the actual progress of the works does not confirm with the approved programme referred to in sub-section 10.1; the S.O. shall be entitled to request the Contractor to produce a revised programme showing the modifications to the original programme necessary to ensure completion of the works or any section thereof within the time for completion as defined in clause 29 of the Conditions of Contract. The Contractor shall update the original programme at one-monthly intervals or when in the opinion of the S.O. changes in circumstances warrant more frequent updating. The Contractor shall explain the reasons for any significant changes in the programme in written.

11.0 PROGRESS REPORTING AND PROGRESS PHOTOGRAPHS

11.1 The Contractor shall report progress at the end of each month. Progress shall be reported on charts submitted in duplicate showing actual work done in relation to both original programme and the latest updated programme. The Contractor shall state his proposals for improving progress should this be necessary.

11.2 The Contractor shall provide colour record progress photographs taken as and when directed by the S.O. representative and in any case at the intervals of not more than one month. Sufficient photographs shall be taken and one proof copy of each shall be supplied to the S.O.'s representative to allow him to select the photographs which in his opinion provide the best record. The Contractor shall provide 2 prints and one softcopy of each selected photographs and four hard covered A4 size ring-file type albums with clear thin plastic sleeves to accommodate 2 sets of the prints and the negative of each selected photograph. The albums and sleeves shall be of types acceptable to the S.O. Each monthly set of photographs shall be accompanied by an A4 size plan(s) of the site indicating the locations and directions in which the photographs were taken. Each print of the selected photographs shall have a picture size of 245mm x 203mm with no border. The Contractor shall also provide 1 print of the same record progress photographs, 3R size mounted on A4 size thin card (4 prints per sheet).

12.0 PREPARATION FOR COMMENCEMENT OF WORKS

12.1 The Contractor shall complete all his preparations to commence works within 14 days of the date of letter of acceptance of tender. Such preparation shall include organizing all manpower, plant, material, transport, furnish security deposit and everything else require for complying with all relevant provisions in the contract.

13.0 METHODS OF CONTRUCTION

13.1 If requested by the S.O., the Contractor shall submit as such times and in such detail as the S.O. reasonably requires, such information pertaining to the method of construction (including temporary works and the use of constructional plant) which the Contractor proposes to adopt for use and such calculations of stresses, strains and deflections that will arise in the permanent works or any parts thereof during construction from the use of such methods as will enable the S.O. to decide whether, if these methods are adhered, the works can be executed in accordance with the drawings and specifications and without determined to the permanent works when completed.

14.0 SEQUENCE OF WORKS

14.1 The works are to be carried out in accordance with the programme and in a sequence to be approved by the S.O. in relation to other works to be executed on site, under other contracts.

14.2 The S.O. may from time to time, by order in writing without in anyway vitiating the contract, require the Contractor to proceed with the execution of the work at such a time as may be deemed desirable, and the Contractor shall not proceed with any work ordered to be suspended until he receives a written order to do so from the S.O.

15.0 PROGRESS OF WORKS

15.1 If for any person which does not entitle the Contractor to an extension of time, the rate of progress of the works or any section is at any time in the opinion of the S.O., too slow to ensure completion by the prescribed time or extended time for the completion, the S.O. shall so notify the Contractor in writing and the Contractor shall thereupon take steps as are necessary and the S.O. may approve to expedite progress, so as to complete the works or such section by the prescribed time or extended time. The Contractor shall not be entitled to any additional payment for taking such steps. If as a result of any notice given by the S.O., the Contractor shall seek the S.O.'s permission to do any works at night or on Sundays; such permission shall not be unreasonably refused.

16.0 SITE RESTRICTION

16.1 The Contractor shall take all necessary precautions not to disturb existing cables, cable ducts, water and sewerage pipes, in the course of his operations. If any cable duct, pipe, fitting, etc is found to be obstructing the progress of works, the relevant work shall be stop immediately and the matter shall be reported to the S.O., who will appropriate necessary action. The work shall be resumed only after the aforementioned cable, cable ducts, pipes or fittings has been re-sited and/or properly protected. For such suspension of the works the Contractors shall not be entitled to any compensation for loss of labour or profit. The Contractor shall bear the cost of the reinstating cables, cable ducts, pipes, fitting, etc. damaged due to negligence on his part or on the part of his workers.

16.2 The Contractor shall not be permitted to construct temporary building at the site of work adjacent to it. Accommodation for workmen, stores for materials etc. shall be provided elsewhere at his own cost and expense.

16.3 The Contractor shall be deemed to have allowed in his tender for all additional cost etc. for complying with all the above requirements and shall not be entitled to any compensation for the same.

17.0 UTILITIES AND SERVICES

17.1 Prior to tendering, the Contractor shall ascertain the extent of public and private utilities which may affect and/or obstruct the works. The Contractor shall be responsible for the location, support, and protection of the utilities and the services during the works and making good any damages. The Contractor shall include in his rates and prices for any fines that imposed by the Services Authorities due to his negligence of damage services, for the inconveniences caused to the works by the utilities and services and for measures taken for their support and protection and making good of any damages.

18.0 DEFECTS LIABILITY PERIOD / MAINTENANCE PERIOD

18.1 Defects and liability period under this Contract shall be **twelve (12) months** from the date of successful completion of all works listed in the Summary of Tender and any variations ordered by the S.O.

18.2 On satisfactory completion of all items of works, the Contractor shall regularly maintain it for a period of 12 months as specified in defect free condition and shall rectify all defects which appear during such period, promptly and to the satisfaction of the S.O. the Contractor shall make good such defects within reasonable time as specified by the S.O. or else the S.O. reserves the right to employ other contactor or departmental workers to rectify the defects and deduct all costs, overheads and all other related charges from monies due to the Contractor.

18.3 Before expiry of the maintenance period of works listed in every works order, the Contractor shall write officially for a final inspection of the works. The Contractor shall only be absolved of all responsibilities of maintenance after all defects are rectified to the satisfaction of the S.O.

18.4 In the event that the Contractor fails to notify the date of expiry of the maintenance period and has not arranged for a joint inspection of the works, the maintenance period of the relevant works shall be deemed to have been extended by the Contractor due to his own default to the date the aforementioned condition is complied with.

19.0 LIQUIDATED DAMAGES

19.1 If the Contractor fail to complete the whole of the works within the period and date specified or such other period or date as may be fixed under the contract, the Contractor shall pay to Government as fixed and agreed liquidated damages the sum specified $\left[\frac{15\% \text{ x CONTRACT SUM}}{\text{CONTRACT DURATION IN DAYS}}\right]$ per day.

20.0 VALIDITY PERIOD OF TENDER

20.1 Unless extended by the tenderer, this tender shall remain valid for a period of **six (6)** months from the closing date of tender.

21.0 COMPLETION PERIOD

21.1 The Contractor is expected to complete all the works, tidy up all the works places and hand over the same to the S.O. within **03 YEARS** commencing from the date within **FOURTEEN (14)** calendar days after the issuance of the letter of acceptance.

22.0 SCHEDULE OF WORKS

22.1 All overheads, on costs and disbursement (including travelling and subsistence, and safety, etc.) relating to provision of the service.

22.2 Provision of necessary staff, access scaffolding and materials to carry out the works. The whole of the works on the site shall be completed within 9 months of their commencement. Approval shall be sought for any materials and equipment prior to start of site work. All materials shall be used in accordance with the manufacturers' instructions.

23.0 FLOW OF TRAFFIC

23.1 The Contractor shall ensure as far as possible the flow of traffic along the road is not inconvenienced, obstructed or endangered by his plants or vehicles parked at the site of work.

23.2 If any part of the at the work site of work is dirtied by spillage of earth, mud or debris etc. from Contractor's plants or vehicles tyres he will be promptly clean up the road. He will ensure all that required cleaning up is done immediately when it becomes necessary to do so.

24.0 STORAGE

24.1 The Contractor shall provide at his own expense suitable offices and adequate storage accommodation for plant and materials. In particular, adequate waterproof storage sheds shall be provided for materials requiring protection against weather, humidity and damage. No materials or plant shall be stored on the public roads.

25.0 CARE OF THE WORKS

25.1 The Contractor shall take full responsibility for the care of the works from the date of the commencement thereof until 14 days after the S.O. shall have issued a certificate of completion for the whole of the works, provide if the S.O. issues a certificate of completion in respect of any section or part of the permanent works before he issue a certificate of completion in respect of the whole of the works, the Contractor shall cease to be responsible for the care of that section or part of the permanent works 14 days after the S.O. shall have issued the certificate of completion in respect of that section or part and the responsibility for the care thereof shall thereupon pass to the employer. Provided further that the Contractor shall have undertaken to finish during the Defects Liability Period until such outstanding work is completed.

26.0 RESPONSIBILITY FOR REINSTATEMENT

26.1 Any damages, loss or injury from any cause whatsoever shall happen to the works or an part thereof while the Contractor shall be responsible for the care thereof the Contractor shall at his own cost repair and make good the same so that at completion the permanent works shall be in good condition and in conformity in every aspect with the requirements of the contract and the S.O.'s instructions. The Contractor shall also be liable for any damage to the works caused by him in the course of any operations carried out by him for the purpose of completing any outstanding work complying with his obligations under Clause 16 of the Conditions of Contract.

26.2 The Contractor shall be responsible for the basic maintenance of roads which are under this contract. He shall include the cost of maintenance such as road cleaning, patching of potholes and etc. in his prices and rates of this tender.

27.0 ACCOMMODATION FOR EMPLOYEES

27.1 The Contractor shall allow in his tender for providing all necessary accommodation, canteen and first-aid facilities and services for his employees, and shall provide for maintaining them in clean and tidy condition throughout the construction period, and for cleaning away and reinstating the site on completion, all to the satisfaction of the S.O. and other appropriate authorities.

28.0 FACILITIES FOR OTHER CONTRACTORS

28.1 The Contractor shall in accordance with the requirements of the S.O. afford all reasonable facilities for any other Contractors employed by the Government and their workmen of the Government and of any other properly authorized authority or statutory body who may be employed in the execution on or near the site of any work not in the contract or of any contract which the Government may enter into in connection with or ancillary to the works.

29.0 INSPECTION OF WORK

29.1 Inspection of Work Before Covering Up

No work shall be covered up or put out of view without the approval of the S.O. and the Contractor shall afford all opportunity for the S.O. to examine and measure any work which is about to be covered up or put out of view and to examine before permanent work is placed therein. The Contractor shall give due notice to the S.O. whenever any such work are ready or about to be ready for examination and the S.O. shall without unreasonable delay unless he considers it unnecessary advice to the Contractor accordingly attend for the purpose of examining and measuring such work.

30.0 REMOVAL OF IMPROPER WORK AND MATERIALS

The S.O. shall during the progress of the works have power to order in writing:

30.1 The removal from the site within such time or times as may be specified of any materials which in the opinion of the S.O. are not in accordance with the Contract.

30.2 The substitution of proper and suitable material.

30.3 The removal and proper re-execution (notwithstanding any previous test thereof interim payment thereof) of any work which in respect of material or workmanship is not in the opinion of the S.O. in accordance with the Contract.

31.0 DEFAULT OF CONTRACTOR IN COMPLIANCE

31.1 In case of default on the part of the Contractor in carrying out such order the Government shall be entitled to employ and pay other persons to carry out the same and all expenses consequent therein or incidental thereto shall be paid by the Government which shall be recoverable from the Contractor or may be deducted from any monies due or which may become due to the Contractor.

32.0 FAILURE TO DISAPPROVE

32.1 Failure of the S.O. or any person acting under him pursuant to Clause 1 of the Conditions if Contract to disapprove any work or materials shall not prejudice the power of the S.O. or any of them subsequently to disapprove such work or material.

33.0 ADVERTISING

33.1 The Contractor shall treat the contract and everything within it as private and confidential. In particular, the Contractor shall not publish any information, drawing or photograph relating to the works and shall not use the site for advertising purposes, except with the written consent of the S.O. and subject to such conditions as he may prescribe.

34.0 PLANT, TOOLS AND EQUIPMENT

34.1 The Contractor shall provide all necessary plant, tools, apparatus, equipment, materials and supplies of sufficient capacity, quantity, quality and type to facilitate the timely execution of the works and for maintenance and removal on completion of project.

34.2 The Contractor is to allow in the Schedule of Rates for the mobilization and demobilization of:

(a) All labour
(b) All materials
(c) All tools, equipment and plants

and all the incidentals necessary to perform the works and the remove of all temporary installation on completion of the works.
These shall comprise:

(a) Transport of all items of construction plant and equipment to the site where they are to be used in the works and their installation.
(b) Transport of all labour, staff and personnel to the site.
(c) Dismantling and removal of all temporary installation, construction plant and equipment so that the site is left in a clean and tidy condition to the satisfaction of the S.O.
(d) Demobilization of all labour, staff and personnel on completion of the works.

35.0 BILL OF QUANTITIES

35.1 The following shall be assumed when compiling the rates included in the bill of quantities. These clauses are given for guidance **only**; the Contractor shall ensure the sufficiency of his rates.

(a) All tender sheets and priced items included there in should be regarded and priced as discrete elements of work. Award of work will be on the basis of the tender sheets but this does not indicate that all work items in any tender sheet will be required. Award of work will not necessarily be given to the lowest tenderer.
(b) It is expected that the Contractor will visit the sites prior to submitting his tender bid to identify the required access and safety equipment etc.

36.0 LABOUR

36.1 The Contractor shall provide all necessary labour for the proper and timely execution of the works. The Contractor shall be responsible for ensuring that the persons provided for the performance of the works are experienced and competent in their respective jobs. The S.O. reserves the rights to direct the Contractor to take off any labourer or employee where in the opinion of the S.O. has bad conduct and behavior or endangering other personnel on the job. The Contractor shall be responsible for all his labourers and employees and comply with the local labour law of the Labour Department of Brunei Government.

37.0 ASSISTANCE TO THE S.O. AND HIS REPRESENTATIVE

37.1 The Contractor shall provide all labour, staying, ladders, wire, ropes, lighting and other equipment, information and assistance required by the S.O. and his representative for inspecting, measuring and for the supervision of the works at any time.

38.0 SOURCE FROM ALLOCATED BORROW PITS

38.1 Cleanliness of Public Roads

The Contractor shall take adequate precaution to avoid spilling of earth, dropping of mud and surplus materials while transporting on Public Roads by Machinery Plant or vehicles. In respect of the Contractor's negligence of the cleanliness of Public Roads the Contractor shall take all his effort to clean or remove spilling earth mud or debris immediately. If the Contractor fails to remove it, the S.O. reserves the right to engage anybody for the removal and cleaning of the same and charge the cost to the contract amount.

39.0 LOCATION, TEMPORARY PROTECTION AND TEMPORARY DIVERSION OF PUBLIC UTILITY INSTALLATION AND OTHER SERVICES

39.1 The Contractor shall be responsible for locating the positions of all public utility installations, including water mains, overhead and underground cables, pipes sewers and drains and all service connections to buildings, and where necessary, shall adopt such methods of excavation as may be required by the appropriate authorities or owners to ensure that no damage is caused to them.

39.2 The Contractor shall make good, at his own expenses, any damage caused by him to the existing services to the approval of and in accordance with the instruction of the appropriate authority or owner concerned, and shall keep the Government indemnified at all times from all claims, costs and expenses which may arise on account of any damage (whether permanent, temporary or recurring) to the said services.

39.3 All such installations which are encountered in the course of the Works shall be adequately supported, slung up, strutted or otherwise protected from injury to the satisfaction of the respective authority.

39.4 The temporary diversion or relocation of any service within or outside the Works shall be the responsibility of the Contractor. Where services are required to be interrupted or relocated the Contractor shall inform and obtain the approval of the S.O. and shall notify the appropriate authority or owner of the required removal and/or relocation.

39.5 Temporary diversion shall mean works involved in the diversion of services that will be reinstated to their original position and condition on completion of the works in the affected areas. In planning his work for the diversion or relocation of services, the Contractor shall make reasonable allowance for the time necessary to obtain the S.O.'s approval for the work and for the appropriate authorities or owners to authorize the work, obtain the necessary materials and carry out the work.

40.0 CLEARANCE OF SITE ON COMPLETION

40.1 On the completion of the works the Contractor shall clear away and remove from the site all constructional plant, surplus material, rubbish and temporary works of every kind and leave the whole of the site and permanent works clean and in a workman like condition to the satisfaction of the S.O.

40.2 The Contractor shall leave every part of the site of operation, in clean, tidy and sound condition and make good any damages resulting from the operation at his own expense and to the satisfaction of the S.O. The Contractor shall be given 3 days from the time of notification, in writing to make good the damages within the said time. In case of the Contractors failure to make good the damages, the S.O. reserves the right to employ other Contractors for the same and deduct all costs and overheads incurred in the process from monies due to the Contractor.

41.0 CONSTRUCTION SITE SAFETY: BASIC SAFETY

41.1 The Contractor is responsible for the support services in areas of safety, fire protection and prevention, industrial hygiene and is obliged to comply with statutory requirements as well as the contractual requirements. It is the responsibility of the Contractor that they, their employees and their sub-Contractors are aware of and familiar with the safety rules, and practices as authorized by the S.O. All reported unsafe practices or unsafe working conditions shall be investigated by the S.O. or his designate. The Contractor is also responsible for performing work under the contract in a healthy and safe manner including protecting the safety and welfare of the other sub-Contractors.

HEALTH AND SAFETY GUIDELINES

42.0 BASIC FIRST AID

42.1 The Contractor shall carry a basic First Aid Kit.

42.2 The staff shall be trained for the following:

(a) To have the necessary knowledge and skill in the application of basic First Aid to an injured person.

(b) To have an understanding of the humans body structure, respiratory, circulatory and nervous system.

(c) To be able to manage internal and external injuries.

(d) To be able to manage injuries involving poisons and toxin burns from insect and animal bites.

43.0 PREPARATION FOR USE OF SAFETY EQUIPMENT

43.1 Where safety equipment is likely to be required it should be ordered well in advance.

43.2 All safety equipment should be accompanied by a test certificate and be tested before use.

43.3 All safety equipment should be used by a team of three.

43.4 All hazardous work requiring special precaution should be scheduled, timed, monitored and progress recorded. The plan of such work shall be approved by Estate Maintenance Unit, RIPAS Hospital.

43.5 Personnel called for duty on hazardous work should be known fitness in health and training i.e. be alert, not subject to fainting, short breath, bad sight, deafness or claustrophobia.

44.0 MAINTENANCE OF SAFETY EQUIPMENT

44.1 Weekly checks should be made on the availability and condition all safety equipment.

45.0 SPECIAL ACCESS AND SAFETY REQUIREMENT

45.1 This work will require the Contractor to have access to a mobile mechanical or hydraulic access plant (hoist vehicle).

45.2 Other special access requirements identified shall be approved by Estate Maintenance Unit, RIPAS Hospital. These may involve the use of special access ladder, scaffolding, etc.

45.3 This work also requires the Contractor to provide safety equipment to all teams including safety harness, safety helmets, etc.

46.0 HEALTH AND WELFARE

46.1 Pay all costs and charges incurred by and comply with all health and welfare regulations appertaining to all persons employed on the site.

47.0 NUISANCE BY CONTRACTOR'S WORKMEN

47.1 The Contractor shall be responsible for restricting his workmen only to the works and shall prevent trespasses into adjoining property and existing buildings on the site in which work is not in progress and shall indemnify the Government against any damages arising from nuisance of any kind.

48.0 DUMPING MATERIALS ON SITE

48.1 No material shall be dumped on site without approval or directive from the S.O.

49.0 MINIMUM OBSTRUCTION

49.1 The Contractor shall cause as little obstruction as possible to the public during the execution of all works under this contract and shall pay due regard to the interest, convenience and safety of the public.

50.0 INSPECTION OF COMPLETED WORKS

50.1 On completion of all items of works, the Contractor shall officially notify the S.O. or his representative within 24 hours of such date of completion so that an inspection of the site can be carried out to ascertain whether or not the work has been completed in a satisfactory manner.

51.0 SUMMARY OF TENDER

51.1 The summary of tender shall form part of this contract and the rates therein shall be used for valuation of the works.

51.2 Where the rates or prices do not apply, the valuation of works shall be based on rates derived from rates in the summary of tender so far as it is reasonable to do so.

51.3 If it is not practicable to use the prices in the summary of tender or to derive prices from there, then unit cost for the valuation of works shall be agreed between the S.O. and the Contractor.

51.4 Where unit of rate is given in length as for center lines, lane lines, edge lines, etc, the rates shall apply to marked length only. Gaps and breaks shall not be considered for any payments.

Double lines shall be treated as two single lines and the relevant unit rate shall apply to the marked length only of each line.

51.5 Where unit of rate is given in area, the rates shall apply to marked surface only.

51.6 The rates in schedule of rates shall be deemed to include profit, transport, labour, material, fuel, plant charges, setting out, insurance, signing, traffic control and all liabilities and obligations of the Contractor under the contract and everything else necessary for the proper completion and maintenance of works.

51.7 All measurement in linear meter and square meter shall be rounded off to two decimal places.

52.0 LANGUAGES

52.1 All manufacturer's specification, certificates, container markings and other relevant information referred to in this specification shall be in English.

52.2 All warning signs used to warn and control traffic at the time and place of works shall be written in Malay.

53.0 AS-BUILT DRAWINGS

53.1 Drawings for recording as-built construction details of the works shall be prepared by the Contractor and shall be certified by the S.O. or his representative. The originals, in good quality transparencies, two (2) paper copies and two (2) set of CD/DVD soft copies of all as-built drawings shall be supplied by the Contractor to the S.O. progressively as sections of the works become completed. All drawings shall be completed within in one (1) month after the completion of the respective section.

53.2 As-built drawing shall be A1 size (838mm x 584mm) unless otherwise approved by the S.O.

1.0 INTRODUCTION

1.1 Environmental impacts can be mitigated by ensuring that any development is sited in a designated area and pollution control measures are incorporated in its design.

1.2 The purpose of the guidelines are to serve as quick reference on pollution control requirements of the Department of Environment, Parks and Recreation for industrial development being proposed or submitted through the industry/land development authority. It is hoped that the guidelines would assist industrialists, architects, professional engineers and consultants in the design and operation of industrial premises.

1.3 These requirements are based on the proposed Environment Order for Brunei Darussalam and complement other pollution control related requirements that may be set by the industry, land and/or building development control authorities. The type of industrial premises covered by the guidelines is for premises listed in **Appendix 1**.

1.4 To ascertain the impact of the development in relation to the surrounding environment and vice versa the project proponent or developer need to submit via the industry/land development authority the following details for review by the Department of Environment, Parks and Recreation:

(i) The trade or industry process proposed to be carried in or on the premises;

(ii) The measures the applicant undertakes to adopt to control land, air, water and noise pollution from the premises; and

(iii) The measures the applicant undertakes to adopt to manage solid waste, hazardous substances and to treat and dispose of toxic substances originating from or stored within the premises.

2.0 WATER POLLUTION CONTROL

2.1 General requirements for water pollution control are:

2.1.1 Trade effluent shall be treated to the allowable limits before discharge into a public sewer or watercourse. The recommended standards for industrial effluents to sewers that discharge themselves to a sewage treatment plant and direct discharges to the environment are given in **Appendix 2 & 3** respectively.

2.1.2 Rainwater shall not be discharged into a public sewer. It shall be channelled into a watercourse. Contaminated rainwater from process areas shall be collected and treated before discharge into the watercourse.

2.1.3 Secondary containment facilities shall be provided for storage tanks containing oils and chemicals to contain accidental release of the entire content of the largest storage tank.

2.2 Specific Requirements for certain operations are as follows:

2.2.1 Chemical/Oil Store

A chemical/oil store shall be provided with facilities to contain any leak and spillage. Such an area shall not have any outlet/opening leading to a storm water drain or a sewer. All leaks and spillage shall be collected for proper disposal as toxic industrial wastes.

2.2.2 Chemical/Oil Bulk Storage Tanks

A full containment facility shall be provided for underground or above ground bulk storage tanks (including skid tanks). The capacity of the containment facility shall not be less than the capacity of the largest tank.

2.2.3 Chemical Warehouses

(i) Separate fire compartments shall be provided for the storage of substances that can react dangerously with one another. Substances in the same hazard categories may be stored together as long as the compartment is protected against the most hazardous substance.

(ii) A retention basin for fire fighting water shall be provided for the storage of hazardous substances.

(iii) The floor of the chemical warehouse shall be coated with a layer of chemical-resistant material.

2.2.4 Laboratory

(i) Wastewater generated from a chemical analysis laboratory shall be discharged into a sewer via a balancing tank, which is also known as a dilution tank.

(ii) Wastewater generated from a biological/food analysis laboratory, however, shall be discharged directly into a sewer.

2.2.5 Aquaculture Farm

(i) Trade effluent generated from aquaculture farms shall be treated to comply with the allowable limits before it is discharged into a watercourse. If the trade effluent does not include rainwater, it may be treated for discharge into a public sewer.

(ii) Sludge, if generated, shall be stabilised, dewatered and disposed of as solid waste.

2.2.6 Livestock Farm

(i) Trade effluent generated shall be collected and treated to comply with the allowable discharge limits before discharging into a public sewer or watercourse where a public sewer is not available.

(ii) Animal wastes and sludge generated from wastewater treatment shall be stabilised, dewatered and disposed of as solid waste.

(iii) Poultry wastes may be collected for disposal as solid wastes. The wastes shall be stored inside a storage shed with a containment facility.

2.2.7 Horticultural Farm

Pesticides and fertilizers that are approved by the Agriculture Department shall be used. The pesticides and fertilizers shall be applied strictly in accordance with the guidelines of the manufacturers or distributors to prevent pollution of surface water.

3.0 AIR POLLUTION CONTROL

3.1 Trade and industrial premises, which carry out activities that can generate air impurities, are required to install, operate and maintain air pollution control equipment properly and efficiently. The pollution control equipment shall be designed to comply with the allowable emission standards. The recommended emission standards for air impurities are given in **Appendix 4**. For air impurities with no prescribed emission standards, the best practical means shall be adopted to minimise air pollution. Exhaust gases from the pollution control equipment shall be emitted into the atmosphere through a discharge stack.

3.2 The use of open fire to dispose of waste wood, timber and other combustible wastes is prohibited.

3.3 Fuel burning equipment shall be efficiently operated and maintained. A chimney of an agreed height shall be provided for the safe dispersion of flue gases from fuel burning equipment. The minimum height shall be at least 3m above roof level of the factory building or 15m measured from ground level whichever is the higher.

3.4 Monitoring equipment shall be provided at the discharge stacks and chimneys to monitor air impurities emitted. The monitoring equipment shall be installed in accordance with the technical specifications of the equipment supplier to give accurate readings. If sampling ports are provided for manual installation of portable sampling equipment, the ports shall be installed such that they are accessible. As an alternative to monitoring the emission of air impurities at discharge stacks or chimneys, equipment may be provided to monitor the performance of automatic devices used to secure more efficient operation of any pollution control or fuel burning equipment.

4.0 NOISE POLLUTION CONTROL

4.1 All practical noise abatement measures shall be adopted to comply with the allowable boundary noise levels. The recommended boundary noise levels are given in **Appendix 5**.

4.2 Mechanical equipment such as air compressors, chillers, cooling towers and air-conditioners, etc. shall be sited as far away as practical from the noise-sensitive and residential buildings. Noise abatement measures, if required, shall be provided to comply with the allowable boundary noise levels.

5.0 HAZARDOUS SUBSTANCE CONTROL

5.1 Industries that need to import, store and use hazardous substances are required to obtain approval from the Department of Environment, Parks and Recreation as well as submit to the Department the Material Safety Data Sheet (MSDS) for the substances. This is in addition to obtaining the necessary approval/license/permit for the import, store and use of the substances as may be specified by the relevant authority, laws and regulations covering that specific substance (e.g. Poisons Act). Storage and handling of the substance must be in accordance with the MSDS. Depending on the quantity and substance, the Fire Services Department and Police Department may also need to be notified prior to transporting the hazardous substances. **Appendix 6** is a list of Hazardous Substances.

5.2 Preventive measures to minimise accidental releases of hazardous substances into the environment need to be taken and emergency response plans need to be put in place to deal with all credible accident scenarios of release of hazardous substances. The preventive measures include the following:

(i) containers constructed and inspected in accordance with internationally acceptable standards are used for the storage of hazardous substances and affixed with approved labels;

(ii) storage areas are equipped with containment as well as disposal facilities to deal with any accidental release of hazardous substances;

(iii) route and time of transportation are specified for the transportation of hazardous substances;

(iv) Drivers of vehicles carrying hazardous substances need to be knowledgeable and trained on safety requirements and precautions, first aid and fire fighting.

5.3 Companies that store and use hazardous substances should carry out a safety audit to systematically identify and rectify weakness in their management systems and practices for handling hazardous substances on a regular basis.

6.0 HAZARDOUS INDUSTRIAL WASTE CONTROL

6.1 Factories are required to ensure that their hazardous wastes are treated and disposed in an environmentally safe manner. Examples of hazardous industrial wastes are listed in **Appendix 7**.

6.2 Department of Environment, Parks and Recreation need to be notified should the factory want to engage the services of industrial waste collectors to collect their wastes for recycling or treatment for safe disposal inside or outside the country.

6.3 Operators of specialised hazardous waste recycling, treatment and disposal plants are required to obtain approval from Department of Environment, Parks and Recreation to collect, treat and dispose of hazardous industrial wastes from industries. They are also required to inform the Fire Services Department when transporting the hazardous industrial wastes. The operators are required to maintain a proper record on collection, treatment and disposal of hazardous industrial wastes.

7.0 SELF-MONITORING AND SUBMISSION OF RESULTS

7.1 The owner or occupier of any industrial premises from which any air impurity, trade effluent or hazardous substances is generated and emitted into the atmosphere, discharged into the environment need to install suitable monitoring equipment or system, agreed by the Department of Environment, Parks and Recreation, at any point along the line of discharge, to monitor the quality and quantity of such emission or discharge or both.

7.2 The owner or occupier of the industrial premises with monitoring equipment or systems installed shall:

(i) ensure that such equipment or system is working in a proper and efficient manner;

(ii) Keep a proper record of all monitoring results; and

(iii) Submit the records to the Department of Environment, Parks and Recreation on a quarterly basis and as and when may be required.

7.3 The owner or occupier of the industrial premises with monitoring equipment or systems installed shall report to the Department of Environment, Parks and Recreation should the level of emission or discharge fails to comply with the recommended standards or requirements.

8.0 COMPLIANCE WITH STANDARDS

8.1 Every new facility shall comply with the guideline's recommended standards.

8.2 The Department of Environment, Parks and Recreation retains the right to modify the standards. Additional standards may be introduced or specified for specific activities and circumstances.

8.2 Every existing facility that does not meet the guideline's recommended standards are required to operate and comply with a provisional standard agreed by the Department of Environment, Parks and Recreation within a specified time period. During such time the owner or occupier of the industrial premises that house the facility is required to report on progress of improvements made to meet the recommended standards.

9.0 USE OF OZONE DEPLETING SUBSTANCES

9.1 The use of ozone depleting substance (ODS) free technology is encouraged in industrial applications. ODS are also categorised as hazardous substances in **Appendix 6**, hence requirements set in part 5.0 of this guideline also applies.

9.2 The production of CFCs and use of CFC dependent technology is not permitted.

9.3 Installation of halon fire-fighting system is not allowed except when the use is deemed essential for the protection of human health or safety and no alternatives are available.

- end -

APPENDIX 1

PREMISES COVERED UNDER THE POLLUTION CONTROL GUIDELINES FOR INDUSTRIAL DEVELOPMENT

Industrial Premises are any premises —

(a) being used for —

(i) cement works, being works for the manufacture or packing of portland cement, similar cement or pozzolanic materials;

(ii) concrete works, being works for the manufacture of concrete and of each batch capacity greater than 0.5 cubic metre;

(iii) asphalt works, being works for the manufacture of asphalt or tarmacadam;

(iv) ceramic works, being works in which any products such as bricks, tiles, pipes, pottery goods, refractories or glass are manufactured in furnaces or kilns fired by any fuel;

(v) chemical works, being works in which acids, alkali, chemical fertilizer, soap, detergent, sodium silicates, lime or other calcium compounds, chlorine, chemicals or chemical products are manufactured;

(vi) coke or charcoal works, being works in which coke or charcoal is produced and quenched, cut, crushed or graded;

(vii) ferrous and non-ferrous metal works, being works in which metal melting process for casting and/or metal coating are carried out;

(viii) gas works, being works in which coal, coke, oil or other mixtures or derivatives are handled or prepared for carbonisation or gasification and in which such materials are subsequently carbonised or gasified;

(ix) crushing, grinding and milling works, being works in which rock, ores, minerals, chemicals or natural grain products are processed by crushing, grinding, milling or separating into different sizes by sieving, air elutriation or in any other manner;

(x) petroleum works, being works in which crude or shale oil or crude petroleum or other mineral oil is refined or reconditioned;

(xi) scrap metal recovery works, being works in which scrap metals are treated in any type of furnace for recovery of metal irrespective of whether this is the primary object of any specific premises or not;

(xii) primary metallurgical works, being works in which ores are smelted or converted to metal of any kind;

(xiii) pulping works, being works in which wood or cellulose material is made into pulp;

(xiv) abrasive blasting works, being works in which equipment or structures are cleaned by abrasive blasting;

(xv) aquaculture, livestock and horticulture farms;

(xvi) food industry, in which slaughtering, preparing and preserving meat, manufacture of dairy products, canning and preserving of fruits and vegetables, canning, preserving and processing of fish, crustaceans and similar food, manufacture of vegetable and animal oils and fats, grain mill products, sugar factories and refineries, manufacture of or production of animal feed are carried out.

(xvii) vehicle manufacturing, repair and servicing and maintenance of engines, motors and mechanical pumps;

(xviii) waste recycling, treatment and disposal;

(b) on which there is erected any boiler of steam generating capacity of 2,300 kilogrammes or more per hour, incinerator or furnace burning 500 kilogrammes or more of solid combustible material per hour or 220 kilogrammes or more of liquid material per hour;

(c) being used or intended to be used for storing —

(i) more than 100 tonnes of one or more of the following substances: chemicals, chemical products, hydrocarbons or hydrocarbon products which are toxic or which produce toxic gases on burning or on contact with water or air; or

(ii) more than 1,000 tonnes of one or more of the following substances: chemicals, chemical products, hydrocarbons or hydrocarbon products with a flash point lower than 55°C.

APPENDIX 2

RECOMMENDED STANDARDS FOR INDUSTRIAL EFFLUENTS TO SEWERS THAT DISCHARGE TO SEWAGE TREATMENT PLANTS

Parameters	
Temperature (°C)	45
Ph	6-9
SS	1000
TDS	3000
Colour	Not Objectionable
BOD	2000
COD	4000
Amm N	50
Aluminium (as Al)	2
Arsenic (as As)	1
Barium (as Ba)	10
Boron (as B)	5
Cadmium (as Cd)	0.1
Chloride	1000
Chlorine (free)	0.5
Chromium 3^+ (as Cr)	2
Chromium 6^+ (as G)	1
Copper (as Cu)	5
Cyanide (as CN)	2
Fluoride (as F)	10
Hydrocarbons	20
Iron (as Fe)	20
Lead (as Pb)	5
Manganese (as Mn)	10
Mercury (as Hg)	0.1
Nickel (as Ni)	5
Oil and Grease	50
Phenols	20
Total Phosphorous (as P)	10
Selenium (as Se)	2
Sulphate (as SO_4)	1000
Sulphide (as S)	5
Synthetic Detergents	20
Tin (as Sn)	10
Zinc (as Zn)	10

All limits are given in mg/l except pH, temperature and colour.
Note: Values are 95 percentiles based on spot samples.

Note: Other restrictions could be introduced covering other specific, and potentially troublesome, constituents. The Government retains the right to modify the proposed standards.

APPENDIX 3

RECOMMENDED EFFLUENT STANDARDS FOR DIRECT DISCHARGE TO THE ENVIRONMENT

Parameters	To Inland Watercourse		To Estuary	To SEA
	Above Potable Water Abstraction	Not Affecting Potable Water Abstraction		
Ph	6-9	6-9	6-9	6-9
Temperature (°C)	40	40	40	45
Colour	No Change	Not Objectionable	Not Objectionable	Not Objectionable
BOD_5	20	20	50	-
COD	150	150	200	-
SS	30	30	50	No identifiable sewage solids
TDS	2000	2500	3000	-
Aluminium (as Al)	5	5	10	-
Arsenic (as As)	0.1	0.5	0.5	1
Barium (as Ba)	2	5	10	20
Beryllium (as Be)	0.5	1	1	2
Cadmium (as Cd)	0.05	0.1	0.1	0.1
Chromium 3^+ (as Cr 3^+)	0.5	1	2	2
Chromium 6^+ (as Cr 6^+)	0.1	0.2	0.2	0.2
Chloride (as Cl)	500	750	2000	5000
Free Chlorine (as Cl)	0.5	0.5	1	2
Cobalt (as Co)	0.1	0.2	0.5	2
Copper (as Cu)	0.5	0.5	1	1
Cyanide (as CN)	0.1	0.2	0.2	0.5
Synthetic Detergents (as ABS)	1	1	2	4
Fluoride (as F)	1.5	2	3	3
Oil and Grease	2	5	5	50
Hydrocarbons	5	5	10	30
Iron (as Fe)	1	5	5	20
Lead (as Pb)	0.1	0.5	1	1
Lithium (as Li)	5	5	10	10
Manganese (as Mn)	1	5	5	10
Mercury (as Hg)	0.005	0.005	0.005	0.005
Molybdenum (as Mo)	0.5	1	1	2
Ammoniacal Nitrogen (as N)	5	50	50	100
Nickel (as Ni)	0.2	0.5	1	2
Nitrate (as N)	10	20	30	50
Nitrite (as N)	0.5	1.0	2	5
Total Nitrogen (as N)	15	50	50	100
Phenols	0.1	0.5	0.5	1
Total Phosphorous (as P)	30	30	30	30
Radioactive Material	In accordance with limits and regulations set by the International Atomic Energy Agency			

Selenium (as Se)	0.05	0.1	0.1	1
Sulphate (as SO_4)	200	400	500	1000
Sulphide (as S)	0.5	1	1	5
Vanadium (as Va)	0.1	0.2	0.5	1
Zinc (as Zn)	1	2	5	5

All limits are given in mg/l except pH, temperature, colour and radioactive material.

Note: Values are 95 percentiles based on spot samples.

APPENDIX 4

RECOMMENDED STANDARDS FOR AIR EMISSIONS

Substance	Trade, industry, process, fuel burning equipment or industrial plant	Emission limits
(a) Ammonia and ammonium compounds	Any trade, industry or process	76 mg/Nm^3 expressed as ammonia
(b) Antimony and its compounds	Any trade, industry or process	3 mg/Nm^3 expressed as antimony
(c) Arsenic and its compounds	Any trade, industry or process	1 mg/Nm^3 expressed as arsenic
(d) Benzene	Any trade, industry or process	5 mg/Nm^3
(e) Cadmium and its compounds	Any trade, industry or process	3 mg/Nm^3 expressed as cadmium
(f) Carbon monoxide	Any trade, industry, process or fuel burning equipment	625 mg/Nm^3
(g) Chlorine	Any trade, industry or process	32 mg/Nm^3
(h) Copper and its compounds	Any trade, industry or process	5 mg/Nm^3 expressed as copper
(i) Dioxins and furans	Any waste incinerator	0.1 ng TEQ/Nm^3
(j) Ethylene oxide	Any trade, industry or process	5 mg/Nm^3
(k) Fluorine, hydrofluoric acid or inorganic fluorine compounds	Any trade, industry or process	50 mg/Nm3 expressed as hydrofluoric acid
(l) Formaldehyde	Any trade, industry or process	20 mg/Nm^3
(m) Hydrogen chloride	Any trade, industry or process	200 mg/Nm^3
(n) Hydrogen sulphide	Any trade, industry or process	7.6 mg/Nm^3

Substance	Trade, industry, process, fuel burning equipment or industrial plant	Emission limits
(o) Lead and its compounds	Any trade, industry or process	5 mg/Nm^3 expressed as lead
(p) Mercury and its compounds	Any trade, industry or process	3 mg/Nm^3 expressed as mercury
(q) Oxides of nitrogen	Any trade, industry, process or fuel burning equipment	700 mg/Nm^3 expressed as nitrogen dioxide
(r) Particulate substances including smoke, soot, dust, ash, fly-ash, cinders, cement, lime, alumina, grit and other solid particles of any kind	Any trade, industry, process, fuel burning equipment or industrial plant (except for any cold blast foundry cupolas)	(i) 100 mg/Nm^3 ;or (ii) where there is more than one flue, duct or chimney in any scheduled premises, the total mass of the particulate emissions from all of such flue, duct or chimney divided by the total volume of such emissions shall not exceed 100mg/Nm^3 and the particulate emissions from each of such flue, duct or chimney shall not exceed 200 mg/Nm^3 at any point in time. (iii) Ringelmann No.1 or equivalent opacity (Not to exceed more than 5 minutes in any period of one hour)
(s) Styrene monomer	Any trade, industry or process	100 mg/Nm^3
(t) Sulphur dioxide (non-combustion sources	Any trade, industry or process	500 mg//Nm^3
(u) Sulphur trioxide and other acid gases	The manufacture of sulphuric acid	500 mg/Nm^3 expressed as sulphur trioxide. Effluent gases shall be free from persistent mist.

Substance	Trade, industry, process, fuel burning equipment or industrial plant	Emission limits
(v) Sulphur trioxide or sulphuric acid mist	Any trade, industry or process, other than any combustion process and any plant involving the manufacture of sulphuric acid	100 mg/Nm^3 expressed as sulphur trioxide
(w) Vinyl chloride monomer	Any trade, industry or process	20 mg/Nm^3

Note: The concentration of any substance specified in the first column emitted from any operation in any trade, industry, process, fuel burning equipment or industrial plant specified in the second column shall not at any point before admixture with air, smoke or other gases, exceed the limits specified in the third column.

''dioxins and furans'' means polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF), being tricyclic and aromatic compounds formed by 2 benzene rings which are connected by 2 oxygen atoms in PCDD and by one oxygen atom in PCDF and the hydrogen atoms of which may be replaced by up to 8 chlorine atoms;
''mg'' means milligram;
''ng'' means nanogram;
''Nm 3 '' means normal cubic metre, being that amount of gas which when dry, occupies a cubic metre at a temperature of 0 degree Centigrade and at an absolute pressure of 760 millimetres of mercury;
''TEF'' means Toxic Equivalency Factor;
''TEQ'' means Toxic Equivalent, being the sum total of the concentrations of each of the dioxin and furan compounds specified in the first column of the table below multiplied by their corresponding TEF specified in the second column thereof:

Dioxin/Furan	*TEF*
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01
Octachlorodibenzo-p-dioxin	0.0001
2,3,7,8-Tetrachlorodibenzofuran	0.1
1,2,3,7,8-Pentachlorodibenzofuran	0.05
2,3,4,7,8-Pentachlorodibenzofuran	0.5
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.0001

APPENDIX 5

RECOMMENDED BOUNDARY NOISE LEVELS

Type of affected premises	Maximum permitted noise level (reckoned as the equivalent continuous noise level over the specified period) in decibels (dBA)		
	Day 7 am - 7 pm	Evening 7 pm – 11 pm	Night 11 pm -7 am
Noise Sensitive Premises	60	55	50
Residential Premises	65	60	55
Commercial Premises	70	65	60

Type of affected premises	Maximum permitted noise level (reckoned as the equivalent continuous noise level over 5 minutes) in decibels (dBA)		
	Day 7 am - 7 pm	Evening 7 pm – 11 pm	Night 11 pm -7 am
Noise Sensitive Premises	65	60	55
Residential Premises	70	65	60
Commercial Premises	75	70	65
Factory Premises	75	70	65

APPENDIX 6

LIST OF HAZARDOUS SUBSTANCES

Part I – Hazardous Substances

Substance	Exclusion
Acetic acid	Substances containing not more than 80%, weight in weight, of acetic acid; Preparations and solutions for photographic use.
Acetyl bromide	
Alkali metal bifluorides; Ammonium bifluoride; Potassium fluoride; Sodium fluoride; Potassium silicofluoride; Sodium silicofluoride; Silicofluoric acid	Preparations containing not more than 0.3%, weight in weight, of potassium fluoride in radiator protectors; Preparations containing not more than 0.96%, weight in weight, of potassium fluoride in photographic chemicals; Substances containing not more than 3%, weight in weight, of sodium fluoride or sodium silicofluoride as a preservative; Substances containing sodium fluoride intended for the treatment of human ailments.
Ammonia	Preparations and solutions of ammonia containing not more than 10%, weight in weight, of ammonia; Refrigeration equipment; Photographic and plan developers; Hair colour dyes; Perm lotions; Smelling bottles.
Ammonium chlorate	
Ammonium perchlorate	

Substance	Exclusion
Anionic surface active agents	Preparations containing less than 5% by weight of anionic surface active agents; Preparations containing anionic surface active agents which are not less than 90% biodegradable under a test carried out in accordance with that part of the OECD method which is referred to as “Confirmatory Test Procedure” in European Communities Council Directive No. 73/405/EEC (C) or other equivalent test methods acceptable to the Director.
Antimony pentachloride	Polishes
Arsenical substances, the following: Arsenic acid Arsenic sulphide Arsenic trichloride Arsine Calcium arsenite Copper arsenate Copper arsenite Lead arsenate Organic compounds of arsenic Oxides of arsenic Potassium arsenite Sodium arsenate Sodium arsenite Sodium thioarsenate	Pyrites ores or sulphuric acid containing arsenical poisons as natural impurities; Animal feeding stuffs containing not more than 0.005%, weight in weight, of 4-hydroxy-3-nitrophenyl-arsonic acid and not containing any other arsenical poison; Animal feeding stuffs containing not more than 0.01%, weight in weight, of arsanilic acid and not containing any other arsenical poison; Animal feeding stuffs containing not more than 0.0375%, weight in weight, of carbarsone and not containing any other arsenical poison.
Asbestos in the form of crocidolite, amosite, chrysotile and amphiboles and products containing these forms of asbestos	Asbestos products containing chrysotile other than roofing sheets, refuse chutes, ceiling boards, partition boards, fire barriers, doors, paints, cement, floor tiles and putty; Asbestos in the form of chrysotile in any vehicle brake or clutch lining not installed in any vehicle if the packaging of the vehicle brake or clutch lining is affixed with the

Substance	Exclusion
	appropriate label.
Benzene	Substances containing less than 1%, weight in weight, of benzene.
Boric acid; Sodium borate	Boric acid or sodium borate in medicinal preparations, cosmetics, toilet preparations and substances being preparations intended for human consumption; Preparations containing boric acid or sodium borate or a combination of both where water or solvent is not the only other part of the composition.
Boron trichloride	
Boron trifluoride	
Bromine; Bromine solutions	
Cadmium-containing silver brazing alloy	
Captafol	
Carbamates	Benomyl; Carbendazim; Chlorpropham; Propham; Thiophanate-methyl; Preparations containing not more than 1%, weight in weight, of propoxur and not containing any other carbamate; Preparations containing not more than 1%, weight in weight, of methomyl and not containing any other carbamate.
Carbon tetrafluoride	
Chlorinated hydrocarbons, the following: Aldrin Benzene hexachloride (BHC) Bromocyclen Camphechlor	Paper impregnated with not more than 0.3%, weight in weight, of benzene hexachloride or gamma - BHC provided it is labelled with directions that no food, wrapped or unwrapped, or food utensils are to be placed on the treated paper, and that it is not to be used where food is prepared or served.

Substance	Exclusion
Chlorbenside Chlorbicyclen Chlordane Chlordecone Chlorfenethol Chlorfenson Chlorfensulphide Chlorobenzilate Chloropropylate Dicophane (DDT) pp'-DDT Dicofol Dieldrin Endosulfan	
Endrin Fenazaflor Fenson Fluorbenzide Gamma benzene hexachloride (Gamma - BHC) HEOD [1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a- octahydro-1, 4 (exo): 5,8 (endo)-dimethano naphthalene] HHDN [1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4 (exo):5,8 (endo)-dimethano naphthalene] Heptachlor Isobenzan	

Substance	Exclusion
Isodrin Kelevan Methoxychlor [1,1,1-trichloro-2,2-di-(p-methoxyphenyl) ethane] Tetrachlordiphenylethane [TDE; 1,1-dichloro-2,2-bis (p-chlorophenyl) ethane] Tetradifon Tetrasul Toxaphene Allied chlorinated hydrocarbon compounds used as pesticides (insecticides, acaricides, etc.)	
Chlorine	Chlorine used for chlorination of water in swimming pools.
Chlorine trifluoride	
Chlorobenzenes, the following: Monochlorobenzene Meta-dichlorobenzene Ortho-dichlorobenzene Trichlorobenzene Tetrachlorobenzene Pentachlorobenzene Hexachlorobenzene	
Chlorophenols, the following: Monochlorophenol Dichlorophenol Trichlorophenol Tetrachlorophenol Pentachlorophenol and their salts	Substances containing not more than 1%, weight in weight, of chlorophenols.

Substance	Exclusion
Chlorophenoxyacids; their salts, esters, amines	
Chloropicrin	
Chlorosilanes, the following: Hexachlorodisilane Phenyltrichlorosilane Tetrachlorosilane	
Chlorosulphonic acid	
Chromic acid	Substances containing not more than 9%, weight in weight, of chromic acid; Photographic solutions containing chromic acid in individual containers containing not more than 15 kilograms each of such solutions and of aggregate weight of not more than 500 kilograms of such solutions.
Cyanides	Ferrocyanides; Ferricyanides. Acetonitrile; Acrylonitrile; Butyronitrile; 2-Dimethylaminoacetonitrile; Isobutyronitrile; Methacrylonitrile; Propionitrile.
Diborane	
Dibromochloropropane	
Diethyl sulphate	
Dinitro-ortho-cresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)")	
Dinosam; its compounds with a metal or a base	
Dinoseb and its salts and esters, which includes but is not limited to -	
Binapacryl	
Diquat; its salts	

Substance	Exclusion
Drazoxolon; its salts	Dressings on seeds.
Dustable powder formulations containing a combination of – Benomyl at or above 7 per cent, Carbofuran at above 10 per cent, thiram at or above 15 per cent	
Endothal; its salts	
Epichlorohydrin	
Ethyl mercaptan	Substances containing less than 1%, weight in weight, of ethyl mercaptan
Ethylene dichloride	
Ethylene imine	
Ethylene oxide	Mixtures of inert gases and ethylene oxide comprising not more than 12%, weight in weight, of ethylene oxide contained in cylinders of water capacity less than 47 litres and for aggregate of not more than 3 numbers of such cylinders.
Ferric chloride	
Fipronil	Formulated products containing Fipronil approved for household use and belonging to the WHO Class IV hazards
Fluorine	
Fluoroacetamide	
Formaldehyde	Substances containing not more than 5%, weight in weight, of formaldehyde; Photographic glazing or hardening solutions.
Formic acid	Substances containing not more than 5%, weight in weight, of formic acid.
Germane	
Hydrazine anhydrous; Hydrazine aqueous solutions	
Hydrochloric acid	Substances containing not more than 9% , weight in weight, of hydrochloric acid.
Hydrofluoric acid	Preparations or solutions containing not more than 2%, weight in weight, of hydrofluoric acid.
Hydrogen chloride	
Hydrogen cyanide; Hydrocyanic acid	Preparations of wild cherry;

Substance	Exclusion
	In reagent kits supplied for medical or veterinary purposes, substances containing less than the equivalent of 0.1%, weight in weight, of hydrocyanic acid.
Hydrogen fluoride	
Hydrogen selenide	
Isocyanates	Polyisocyanates containing less than 0.7%, weight in weight, of free monomeric diisocyanates; Pre-polymerised isocyanates in polyurethane paints and lacquers; Hardeners and bonding agents for immediate use in adhesives.
Lead compounds in paint	Lead compounds in paint in which the lead content is not more than 0.06% by weight of the paint; Lead compounds in paint in which the container is affixed with an appropriate label; The labels to be used for paints containing lead compounds are in accordance with Part IV of the Second Schedule.
Lead tetra-ethyl and similar lead containing compounds in petrol intended for use in Brunei Darussalam as fuel for motor vehicles	
Mercury compounds including inorganic mercury compounds, alkyl mercury compounds, alkyloxyalkyl and aryl mercury compounds, and other organic compounds of mercury	
Mercuric chloride; Mercuric iodide; Organic compounds of mercury	Dressings on seeds or bulbs; Toilet, cosmetic and therapeutic preparations containing not more than 0.01%, weight in weight, of phenyl mercuric salts as a preservative; Antiseptic dressings on toothbrushes; Textiles containing not more than 0.01%, weight in weight, of phenyl mercuric salts as a bacteriostat and fungicide.
Mercury and its compounds in batteries	Batteries other than mercury oxide batteries, zinc carbon batteries containing more than 0.001% by weight of mercury per cell and alkaline batteries, except those in button form, containing more than 0.025% by weight

Substance	Exclusion
	of mercury per cell.
Metanil yellow (sodium salt of metanilylazo-diphenylamine)	Dye-indicators used in laboratories.
Methyl chloride	
Methyl mercaptan	Substances containing less than 1%, weight in weight, of methyl mercaptan.
Monomethyltetrachloro diphenyl methane	
Monomethyl-dichloro-diphenyl methane	
Monomethyl-dibromodiphenyl methane	
Neonicotinoid compounds used as pesticides, the following:	
Imidacloprid	Formulated products containing Imidacloprid approved for household use and belonging to the WHO Class IV hazards.
Niclofolan	
Nicotine sulphate	
Nitric acid	Substances containing not more than 9%, weight in weight, of nitric acid.
Nitric oxide	
Nitrobenzene	Substances containing less than 0.1%, weight in weight, of nitrobenzene; Soaps containing less than 1%, weight in weight, of nitrobenzene; Polishes and cleansing agents.
Nitrogen trifluoride	
Oleum	
Orange II [sodium salt of p-(2-hydroxy-1-naphthylazo) benzenesulphonic acid]	
Organic peroxides	Car puttys; Substances and preparations containing not more than 3%, weight in weight, of organic peroxides; Solutions of not more than 60%, weight in weight, of methyl ethyl ketone peroxides and total aggregate weight of less than 50 kilograms of such solutions.

Substance	Exclusion
Organo-tin compounds, the fpllowing:	
Compounds of fentin	
Cyhexatin	
Tributyl tin compounds	
Ozone depleting substances, namely: (*a*) Chlorofluorocarbons, the following: Chloroheptafluoropropane Chloropentafluoroethane Chlorotrifluoromethane Dichlorodifluoromethane Dichlorohexafluoropropane Dichlorotetrafluoroethane Heptachlorofluoropropane Hexachlorodifluoropropane	Products containing any ozone depleting substance other than the following products: (*a*) in the case of chlorofluorocarbons — (i) air-conditioners in vehicles; (ii) equipment for domestic or commercial refrigeration or air-conditioning or heat pump equipment, which contains any chlorofluorocarbon substance as a refrigerant or in any insulating material of such equipment;
Pentachlorofluoroethane Pentachlorotrifluoropropane Tetrachlorodifluoroethane Tetrachlorotetrafluoropropane Trichlorofluoromethane Trichloropentafluoropropane Trichlorotrifluoroethane (*b*) Halons, the following: Bromochlorodifluoromethane Bromochloromethane Bromotrifluoromethane Dibromotetrafluoroethane	(iii) refrigerators that have a compressor rating which exceeds one horsepower; (iv) non-pharmaceutical aerosol products; (v) insulation boards, panels or pipe covers; (vi) polystyrene sheets or finished products; (*b*) in the case of Halons, portable fire extinguishers; and (*c*) in the case of bromotrifluoromethane, fire protection systems.

Substance	Exclusion
(*c*) Hydrochlorofluorocarbons, the following: 1,1-dichloro-1-fluoro-ethane 1,1-dichloro-2,2,3,3,3-pentafluoropropane 1,3-dichloro-1,2,2,3,3-pentafluoropropane 1-chloro-1,1-difluoro-ethane Chlorodifluoroethane Chlorodifluoromethane Chlorodifluoropropane Chlorofluoroethane Chlorofluoromethane Chlorofluoropropane Chlorohexafluoropropane Chloropentafluoropropane Chlorotetrafluoroethane Chlorotetrafluoropropane Chlorotrifluoroethane Chlorotrifluoropropane Dichlorodifluoroethane Dichlorodifluoropropane Dichlorofluoroethane Dichlorofluoromethane Dichlorofluoropropane Dichloropentafluoropropane Dichlorotetrafluoropropane Dichlorotrifluoroethane Dichlorotrifluoropropane Hexachlorofluoropropane Pentachlorodifluoropropane Pentachlorofluoropropane Tetrachlorodifluoropropane Tetrachlorofluoroethane Tetrachlorofluoropropane Tetrachlorotrifluoropropane	

Substance	Exclusion
Trichlorodifluoroethane Trichlorodifluoropropane Trichlorofluoroethane Trichlorofluoropropane Trichlorotetrafluoropropane Trichlorotrifluoropropane (*d*) Hydrobromofluorocarbons, the following: Bromodifluoroethane Bromodifluoromethane Bromodifluoropropane Bromofluoroethane Bromofluoromethane Bromofluoropropane Bromohexafluoropropane Bromopentafluoropropane Bromotetrafluoroethane Bromotetrafluoropropane Bromotrifluoroethane Bromotrifluoropropane Dibromodifluoroethane Dibromodifluoropropane Dibromofluoroethane Dibromofluoromethane Dibromofluoropropane Dibromopentafluoropropane Dibromotetrafluoropropane Dibromotrifluoroethane Dibromotrifluoropropane Hexabromofluoropropane Pentabromodifluoropropane Pentabromofluoropropane Tetrabromodifluoropropane Tetrabromofluoroethane	

Substance	Exclusion
Tetrabromofluoropropane Tetrabromotrifluoropropane Tribromodifluoroethane Tribromodifluoropropane Tribromofluoroethane Tribromofluoropropane Tribromotetrafluoropropane Tribromotrifluoropropane (*e*) Carbon tetrachloride (*f*) 1,1,1-trichloroethane (methyl chloroform) (*g*) Methyl bromide	
Organo-tin compounds, the following: Compounds of fentin Cyhexatin	
Paraquat; its salts	Preparation in pellet form containing not more than 5%, weight in weight, of salts of paraquat ion.
Perchloromethyl mercaptan	Substances containing less than 1%, weight in weight, of perchloromethyl mercaptan.
Phenols, the following: Catechol Cresol Hydroquinone Octyl phenol Phenol Resorcinol	Preparations containing less than 1%, weight in weight, of phenols; Phenols which are intended for the treatment of human ailments and other medical purposes; Soaps for washing; Tar (coal or wood), crude or refined; Photographic solutions containing hydroquinone in individual containers containing not more than 15 kilograms each of such solutions and of aggregate weight of not more than 500 kilograms of such solutions.
Phosgene	
Phosphides	
Phosphine	
Phosphoric acid	Substances containing not more than 50%, weight in weight, of phosphoric acid.

Substance	Exclusion
Phosphorus compounds used as pesticides (insecticides, acaricides, etc.), which includes but is not limited to: Methamidophos Methyl-parathion Monocrotophos Parathion Phosphamidon	Acephate; Bromophos; Iodofenphos; Malathion; Pirimiphos-methyl; Temephos; Tetrachlorvinphos; Trichlorfon; Preparations containing not more than 0.5%, weight in weight, of chlorpyrifos and not containing any other phosphorus compound; Preparations containing not more than 0.5%, weight in weight, of dichlorvos and not containing any other phosphorus compound; Materials impregnated with dichlorvos and not containing any other phosphorus compound for slow release; Preparations containing not more than 1%, weight in weight, of azamethiphos and not containing any other phosphorus compound.
Phosphorus oxychloride	
Phosphorus pentachloride	
Phosphorus pentafluoride	
Phosphorus trichloride	
Polybrominated biphenyls	
Polychlorinated biphenyls	
Polychlorinated terphenyls	
Potassium hydroxide	Substances containing not more than 17%, weight in weight, of potassium hydroxide; Accumulators; Batteries.
Prochloraz	
Fenvalerate	Formulated products containing Fenvalerate approved for household use and belonging to the WHO Class IV hazards

Substance	Exclusion
Sodium azide	Air bag devices in motor vehicles
Sodium hydroxide	Substances containing not more than 17%, weight in weight, of sodium hydroxide; Made-up formulated preparations either liquid or solid for biochemical tests.
Sulphur in diesel intended for use in fuel for motor vehicles or industrial plants	Sulphur in diesel in which the sulphur content is 0.005% or less by weight.
Sulphur tetrafluoride	
Sulphur trioxide	
Sulphuric acid	Substances containing not more than 9%, weight in weight, of sulphuric acid; Accumulators; Batteries; Fire extinguishers; Photographic developers containing not more than 20%, weight in weight, of sulphuric acid.
Sulphuryl chloride	
Sulphuryl fluoride	
Tetraethyl lead, tetramethyl lead and similar lead containing compounds	
Thallium; its salts	
Titanium tetrachloride	
Tris (2, 3-dibromo-l-propyl) phosphate	

Part II - General Exemptions

Adhesives;
Anti-fouling compositions;
Anti-fouling compositions other than those containing tributyl tin compounds as defined in Part I of this Schedule;
Builders' materials other than those containing asbestos as defined in this List;
Ceramics;
Distempers;
Electrical valves;
Enamels;
Explosives;
Fillers;
Fireworks;
Fluorescent lamps;

Glazes;
Glue;
Inks;
Lacquer solvents;
Loading materials;
Matches;
Motor fuels and lubricants except diesel oil and petrol;
Paints other than paints containing mercury compounds, paints containing lead compounds and paints containing asbestos as defined in Part I of this Schedule;
Pharmaceutical Aerosols
Photographic paper;
Pigments other than those containing tributyl tin compounds as defined in Part I of this Schedule;
Plastics;
Propellants other than those containing ozone depleting substances;
Rubber;
Varnishes;
Vascular plants and their seeds.

APPENDIX 7

LIST OF HAZARDOUS INDUSTRIAL WASTES

SW 1 METAL AND METAL-BEARING WASTES

SW 101 Waste containing arsenic or its compound

SW 102 Waste lead acid batteries, whole or crushed

SW 103 Waste batteries containing cadmium and nickel or mercury or lithium

SW 104 Dust, slag, dross or ash containing oxides or sulphate of metals including lead, cadmium, chromium, nickel, copper, vanadium or beryllium

SW 105 Galvanic sludge

SW 106 Residues from recovery of acid pickling liquor

SW 107 Slag from copper processing for further processing or refining containing arsenic, lead or cadmium

SW 108 Leaching residues from zinc processing, dust and sludge

SW 109 Waste containing mercury or its compound

SW 110 Waste electrical and electronic assemblies containing components such as accumulators, mercury-switches, glass from cathode-ray tubes and other activated glass or polychlorinated biphenyl-capacitors contaminated with cadmium, mercury, lead or polychlorinated biphenyl

SW 2 WASTES CONTAINING PRINCIPALLY INORGANIC CONSTITUENTS WHICH MAY CONTAIN METALS AND ORGANIC MATERIALS

SW 201 Asbestos wastes in sludge, dust or fibre forms

SW 202 Waste catalysts

SW 203 Immobilized scheduled waste, including chemically fixed, encapsulated sludge, solidified or stabilized sludge

SW 204 Metal hydroxide, oxide or sulphate sludge containing one or several metals, including chromium, copper, nickel, zinc, lead, cadmium, aluminium, tin, vanadium and beryllium

SW 205 Waste gypsum arising from chemical industry processes

SW 206 Spent inorganic acids

SW 3 WASTES CONTAINING PRINCIPALLY ORGANIC CONSTITUENTS WHICH MAY CONTAIN METALS AND INORGANIC MATERIALS

SW 301 Spent organic acids with pH <= 2 which are corrosive or hazardous

SW 302 Sludge containing fluoride from the wastewater treatment system of electronic or semiconductor manufacturing plant

SW 303 Flux waste, containing mixture of organic acids, solvents or compounds of ammonium chloride from fluxing bath of metal treatment process

SW 304 Adhesive or glue waste containing organic solvents, excluding solid polymeric materials

SW 305 Press cake from pre-treatment of glycerol soap lye from detergent soap or toiletries plant

SW 306 Spent lubricating oil from industrial or automotive sources

SW 307 Spent hydraulic oil from machines, including plastic injection moulding machines, turbines and die-casting machines

SW 308 Spent oil-water emulsion used as coolants

SW 309 Oil tanker sludge

SW 310 Oil-water mixtures such as ballast water

SW 311 Sludge from oil storage tank

SW 312 Waste oils or oily sludge from wastewater treatment plant of refinery or crude oil terminal

SW 313 Oily residues from automotive workshop or service station oil or grease interceptor

SW 314 Oil contaminated earth from re-refining of used lubricating oil

SW 315 Oil or sludge from oil refinery maintenance operation

SW 316 Tar or tarry residues from oil refinery or petrochemical plant

SW 317 Acid sludge from the re-refining of used lubricating oil

SW 318 Spent organometallic compounds may be mixed with benzene excluding mercury compound, or residues of organometallic compounds, including tetraethyl lead, tetramethyl lead and organotin compounds from mixing process of anti-knock compound with gasoline

SW 319 Waste, substances and articles containing, consisting of or contaminated with Polychlorinated Biphenyls (PCB) or Polychlorinated Triphenyls (PCT)

SW 320 Waste phenols, phenol compounds including chlorophenol in the form of liquids or sludge

SW 321 Waste containing formaldehyde

SW 322 Rubber or latex wastes containing organic solvents or heavy metals

SW 323 Waste non-halogenated organic solvents

SW 324 Waste halogenated organic solvents

SW 325 Waste halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery process

SW 326 Uncured resin waste containing organic solvents or heavy metals including epoxy resin, phenolic resin

SW 327 Waste organic phosphorus compound

SW 4 WASTES WHICH MAY CONTAIN EITHER INORGANIC OR ORGANIC CONSTITUENTS

SW 401 Spent alkalis containing heavy metals

SW 402 Spent alkalis with pH >=11.5 which are corrosive or hazardous

SW 403 Discarded drugs containing organic solvents, euphoric compounds, living vaccines, biocides or heavy metals

SW 404 Pathogenic, clinical wastes or quarantined materials

SW 405 Waste from the pharmaceutical products manufacturing plant or packaging of drugs

SW 406 Clinker, slag and ashes from scheduled wastes incinerator

SW 407 Air pollution control system residues containing dioxins, furans and their precursor

SW 408 Contaminated soil, debris or matter resulting from clean-up of a spill of chemical or mineral oil or scheduled waste

SW 409 Containers, bags or process equipment contaminated with chemicals or pesticides or mineral oil or scheduled wastes

SW 410 Rags, plastics, papers or filters contaminated with paint or ink or organic solvent or mineral oil or scheduled wastes

SW 411 Spent activated carbon excluding from the treatment of potable water and processes of the food industry and vitamin production

SW 412 Plating bath sludge containing cyanide from metal finishing processes

SW 413 Spent salt containing cyanide from heat treatment processes

SW 414 Spent aqueous alkaline solution containing cyanide from treatment process metal or plastic surfaces

SW 415 Spent quenching oils containing cyanides

SW 416 Sludge of inks, paints, pigments, lacquer, dye or varnish

SW 417 Waste of inks, paints, pigments, lacquer, dye or varnish

SW 418 Discarded or off-specification inks, paints, pigments, lacquer, dye or varnish products

SW 419 Spent di-isocyanates and residues of isocyanate compounds excluding solid polymeric material from foam manufacturing process

SW 420 Leachate from scheduled waste landfill or leachate from municipal solid waste landfill

SW 421 A mixture of scheduled wastes

SW 422 A mixture of scheduled and non-scheduled wastes

SW 423 Spent processing solution, discarded photographic chemicals or discarded photographic wastes from film processing or plates making

SW 424 Spent oxidizing agent

SW 425 Wastes from the production, formulation, trade or use of pesticides, herbicides or biocides

SW 426 Off-specification products from the production, formulation, trade or use of pesticides, herbicides or biocides

SW 427 Mineral sludge, including calcium hydroxide sludge, phosphate sludge, calcium sulphite sludge and carbonates sludge

SW 428 Wastes from wood preserving operation using inorganic salts containing-copper, chromium and arsenic of fluoride compounds or using compound containing chlorinated phenol or creosote

SW 429 Chemicals that are discarded or off-specification

SW 430 Obsolete laboratory chemicals

SW 431 Waste from manufacturing or processing or use of explosives

SW 432 Waste thermal (heat transfer) fluids including ethylene glycol

SW 433 Waste containing, consisting of or contaminated with peroxides

SW 5 OTHER WASTE

SW 501 Waste that demonstrates one or more hazardous properties by the presence of substance or products that are explosive, oxidising, flammable, toxic, harmful, corrosive, irritant, carcinogenic, teratogenic or mutagenic.

PROJECT: KK/357/2022/ESTETRIPASH(TC)

DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS

INSTRUCTION TO TENDERERS

1. **Type of Contract**

This is a clinical waste contract for **"DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS".**

2. **Tender Documents**

This particular Contract document is supplementary to the Public Works Department's General Specification for Building and Construction Works, Negara Brunei Darussalam. Any discrepancies encountered shall be explained by the Superintending Officer (S.O.) who shall decide any and all questions which may arise as to the interpretation of this Contract Document together with the Specifications and Contract Drawings and whose decision shall be firm and binding in this Contract. The S.O. has the right to alter, add in or delete any or all parts of the specification at any time.

3. **Tender**

The tender is required to complete and sign the following:

a. Form of Tender
b. Appendix to Tender Form
c. The Summary of Tender with every item legibly priced in ink and with columns added up to the tender
e. Appendix A: Additional information to be supplied by tenderers

4. **Definition**

The following terms and their derivations used on this Document are defined:

a. Superintending Officer (S.O.) shall mean the Permanent Secretary, Ministry of Health of Brunei Darussalam, to supervise the work within this Contract.
b. Specified means specified in this Document or in any standards, by-laws, regulation, etc. mentioned herein and shall mean compliance with the latest edition thereof.
c. Approved means approved by the Superintending Officer, in writing with these requirements.
d. Described means described in this Documents or the related drawings.
e. Instructed shall mean instructed by means of drawings, correspondence or other documents issued by the Superintending Officer. Verbal instructions and approvals shall be confirmed in writing and such instructions shall be superseded any requirements specified or describe to the contrary.
f. Government (Govt) means the Government of Brunei Darussalam.
g. The Contractor means the successful Tenderer to whom the Contract for the **"DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS".**

5. **Execution of Tenders**

In accordance with the above, the Tender must be signed or sealed or otherwise executed in such manner that they shall be binding on the Tenderers if accepted. Tender not so executed may be rejected.

6. **Submission of Tender**

The tender documents all properly completed, signed and executed shall be enclosed in a sealed envelope addressed to and delivered to the office of:

Project No.:	
Tender For:	***"DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS".***
To:	***Pengerusi Lembaga Tawaran Kecil*** ***Kementerian Kesihatan, Tingkat Bawah,*** ***Jalan Menteri Besar,*** ***Commonwealth Drive,*** ***Bandar Seri Begawan, BB3910*** ***Negara Brunei Darussalam***

Envelope shall be prominently marked at the top left hand corner:

PRIVATE AND CONFIDENTIAL

The tender must be delivered **NOT LATER THAN 2.00 PM** on Tuesday **24th January 2023**

9. **Acceptance or Rejection of Tender**

The Government of Brunei Darussalam is not bound to accept the lowest or any tender. Without limiting the generality of the foregoing statement. Tenders which are incomplete, obscure or irregular may be rejected; tenders with conditions may be rejected and tenders in which unit rates are omitted or in which rates are obviously unbalanced may be rejected.

10. **Cost of Tendering**

Tenderers will not be reimbursed for any expenses incurred in the preparations or submission of tenders.

11. **Schedule of Rates & Bill of Quantities**

The quantities given in the bills are provisional. The formation levels, profile and scope of works may be varied by the S.O. as the works proceeds. The final value of the contract will be calculated on the basis of the actual work done and the rates for the respective items of work entered in the Schedule of Rates. The Contractor is not eligible for extra payments for reduction in the value of work.

12. **Discrepancies and Errors**

Should the Tenderer make any errors in his extensions and/or in carrying forward to the Summary or any obvious pricing errors, this shall be so rectified and adjusted that, when correctly calculated, the total of the summary shall represent the same amount as that tendered by the Tenderer in the Form of Tender. The net aggregate amount of such errors, whether a net reduction or a net addition will be calculated as percentage of the Summary of the Bill of

Quantities and all unit rates throughout the Bills of Quantities shall be subjected to the percentage discount. Provisional or Prime Cost Sums shall be excluded from the calculation and shall not be subjected to such percentage discount or premium.

13. **Confidential Tender Documents**

The Tender (whether or not he submits a tender) shall treat the Tender Documents as private and confidential and not reveal anything about this tender either to the public or to the press.

14. **Programme**

The tenderer are to submit their tenders detailed construction programme in the form of Gantt Charts to show when they expect to carry out various parts of the work.

15. **Time of Completion**

The attentions of Tenderers are drawn to Clause 19 of the General and Preliminaries dealing with Liquidated Damages which will be imposed for late completion.

16. **Maintenance of Existing Services**

Careful consideration should be given by the Tenderer to ensure that all necessary work to maintain existing facilities including existing services can be suitably coordinated with his proposed programme of the work and that due and adequate allowance has been made for these related works in his pricing.

17. **Services**

The Tenderer's attention is drawn to the fact that an extensive and complex network of services mains, pipes and cables exist within or adjacent to the site which will materially affect the Contractor's programme and costs of work required to maintain servicing facilities without interruption during the course of the work. The Tenderer shall made due allowance in his prices for these services. The Contractor shall be fully responsible for all expenses related to repair of or fines due to any damages of any services in the vicinity of the site.

18. **Site Visit**

Tenderers shall visit the site to familiarize themselves with all factors which will materially affect their Tenders. Due allowance shall be made in the Tenders for all such factors.

19. **Interpretation of Documents**

Any doubts or clarifications regarding the documents shall be clarified with the S.O. in writing.

20. **Addenda**

Prior to the date of closing Tenders, the S.O. may issue Addenda to clarify or modify the Tender Documents. A copy of each Addenda will be issued to every Tenderer and shall become part of the Tender Document. Receipt of each Addenda must be acknowledged on the form issued with the Addenda.

21. **Language**

All manufacturer's specification, certificates, container markings and other relevant information referred to in this specification shall be in English.

22. **Validity of Tender**

All tenders submitted shall be deemed to remain valid for 6 months from the date of closing tender and no tenderer may withdraw his tender within that period.

DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO OFF-SITE LOCATION FOR THREE (3) YEARS.

SUMMARY OF BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate	Amount	
					$	cts
1	All quantities are **PROVISIONAL** are subject to final measurement upon completion. The OIC will not entertain any claims if this is not formalized for any approved variation. All price quoted to be inclusive of insurance. The Contractor shall provide suitable and adequate PPE for all workers and supervisor on site. The descriptions stated in the quotation are not comprehensive. Reference should be made to the OIC for details. Unless otherwise specifically stated in the quotation. The following shall be deemed to be included with:- • Labour & all cost in connection therewith. • Loading and unloading Clinical Waste and shall be **WEIGHING WITH ORIGINAL RECEIPT**. • Clinical waste materials shall be burned using **COMPANY'S INCINERATOR**machine. •Keep the RIPAS Hospital waste dumping sites tidy and free from waste, debris and the like. • Use machine, equipment and all cost in connection therewith. • Engage a **3rd Party Auditor** to conduct audits at planned intervals to provide information on whether the Medical Waste Management System are conforms to the Medical Waste Management System Requirements and is effectively implemented and maintained. The 3rd Party Auditor shall be Certified with ISO 9001:2015 Quality Management System Lead Auditor Course Certified by an Accredited Certification Body. • Provide photographs to be 4r sizes (1set) including before commencement of works throughout the duration of the project and after completion of works prior to submission of payment.					
2	To provide the service for collecting of the clinical waste from Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital waste dumping sites to an off-site location and the service for burning of the clinical waste. Rate to include Two (2) of Hooklift Waste Skip Containers with a minimum size of 18m3 each for RIPAS Hospital waste dumping sites. ***Note:*** To comply with the Recommended Standards for Air Emissions as specified in the Appendix 4, Pollution Control Guidelines for Industrial Development in Brunei Darussalam, June 2003 Edition.	Tons	1,300			
				TOTAL AMOUNT :-		

TENDER FORM

TENDER REFERENCE NO: KK/357/2022/ESTETRIPASH(TC)

DISPOSAL OF CLINICAL WASTE INCLUDING COLLECTION, TRANSPORTATION AND INCINERATE FROM RAJA ISTERI PENGIRAN ANAK SALEHA HOSPITAL TO AN OFF-SITE LOCATION FOR THREE (3) YEARS.

1. I/we, the undersigned having examined and fully understood the tender Documents, inspected and checked the site, offer to carry out and execute the above works in accordance with all relevant Standards Specification and Codes of Practice for the sum of Brunei Dollars.

   Brunei Dollars _____

   _____(B$ _____) only.

2. If my/our tender is accepted, I/we undertake to complete the whole works within **3 Years** from the date of possession/commencement allowing for all possible cause of delay which can reasonably be foreseen and not merely representing the number of working days required.

3. I/we confirm that my/our tender has been calculated on a firm price basis and that I/we have taken into account all aspects, site conditions and other matter that may affect the works. I/we understand that I/we not be allowed any claims for payment may arise out of my/our misunderstanding, and/or misinterpretation and/or miscalculation of the works and/or site conditions.

4. I/We agree to the provision and conditions in **Appendix.**

5. I/we understand and agree that the Government has the option to accept part of my/our tender and I/we agree and confirm that in such case, there shall be no adjustment of my/our tender prices and/or rates.

6. Unless and until a formal agreement is prepared and executed, this tender offer together with your Letter of Acceptance thereof shall constitute a legal and binding contract between us.

7. Our Tender is fully consistent with and does not contradict or derogate from anything in your Invitation To Tender. We have not qualified or changed any of the provisions of your Invitation To Tender.

8. Our offer is valid for **six (6)** calendar months from the tender closing date.

9. When requested by you, we shall extend the validity of this offer.

Signature & Date _____

Name _____

In the capacity of _____

(Position in the Company)

_____

(Tenderer Official Stamp)

On behalf of _____

(Name of Company).

Address _____

Telephone & Fax _____

MOH Registration No _____

(Copy of MOH Registration Certificate to be attached)

Tender Deposit No. _____