



**BORANG AS 16A  
FORM AS 16A**

**PERMOHONAN KELULUSAN MEMASANG, MENEMPATKAN  
SEMULA/MENGUBAH ALAT PEMBAKARAN BAHANAPI  
DI BAWAH PERATURAN 36 DAN 38, PERATURAN -PERATURAN  
KUALITI ALAM SEKELILING (UDARA BERSIH), 1978**

*APPLICATION FOR APPROVAL TO INSTALL / RESITE / ALTER FUEL  
BURNING EQUIPMENT UNDER REGULATIONS 36 AND 38  
OF THE ENVIRONMENTAL QUALITY (CLEAN AIR)  
REGULATION, 1978*

Sila kemukakan borang yang telah lengkap diisi  
ke pejabat Jabatan Alam Sekitar Negeri di mana projek/premis ini ditempatkan.  
*Please submit completed form to the Department of Environment State Office  
where the project/premise is located.*

**JABATAN ALAM SEKITAR  
KEMENTERIAN SUMBER ASLI DAN ALAM SEKITAR  
DEPARTMENT OF ENVIRONMENT  
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT**

**PERMOHONAN KELULUSAN MEMASANG, MENEMPATKAN SEMULA/MENGUBAH  
ALAT PEMBAKARAN BAHANAPI DI BAWAH PERATURAN 36 DAN 38,  
PERATURAN-PERATURAN KUALITI ALAM SEKELILING (UDARA BERSIH), 1978  
APPLICATION FOR APPROVAL TO INSTALL/RESITE/ALTER A FUEL  
BURNING EQUIPMENT UNDER REGULATIONS 36 AND 38  
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REGULATIONS, 1978**

**A**

**Pengenalan  
IDENTIFICATION**

1. Nama dan alamat pemohon  
*Name and address of applicant*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Lokasi alat pembakaran bahanapi (Sila kemukakan pelan yang menunjukkan bangunan-bangunan dan kegunaan tanah dalam lingkungan 1000 meter)  
*Location of fuel burning equipment (Please attach a plan showing the surrounding buildings and landuse within 1000 meters)*

\_\_\_\_\_

Pelan lokasi berkenaan disertakan  
*Location plan is attached*

Tajuk: \_\_\_\_\_ Nombor rujukan: \_\_\_\_\_  
*Title Reference number*

- (a) Garislintang dan garisbujur premis  
*Latitude and longitude of the premises*

Garis lintang \_\_\_ darjah \_\_\_ minit \_\_\_ saat    Garis bujur \_\_\_ darjah \_\_\_ minit \_\_\_ saat  
*Latitude degree minutes second Longitude degree minutes second*

3. Tinggi rumah alat pembakaran bahanapi/bangunan alat pembakaran bahanapi ditempatkan: \_\_\_\_\_ meter    *Height of fuel burning equipment house/structure housing the fuel burning equipment \_\_\_\_\_ meters*

Tajuk: \_\_\_\_\_ Nombor rujukan: \_\_\_\_\_  
*Title Reference number*

- 4.. Bangunan tertinggi dan lebarnya dalam jarak 250 meter dari rumah alat pembakaran bahanapi (berhubung dengan paras bumi rumah alat pembakaran bahanapi)  
*Maximum height and width of building within 250 meters from the fuel burning equipment house (with reference to ground level of fuel burning equipment house)*

\_\_\_\_\_ meter  
*meters*

Lukisan berkenaan disertakan  
*Drawing is attached*

Tajuk: \_\_\_\_\_ Nombor Rujukan: \_\_\_\_\_  
*Title Reference number*

**B**

**MAKLUMAT ALAT PEMBAKARAN BAHANAPI**  
**INFORMATION OF THE FUEL BURNING EQUIPMENT**

5. Butir-Butir Alat Pembakaran Bahanapi  
*Details of Fuel Burning Equipment*

- (i) Jenis Alat Pembakaran Bahanapi: \_\_\_\_\_  
*Type of Fuel Burning Equipment*
- (ii) Nama Pembuat: \_\_\_\_\_  
*Manufacturer*
- (iii) Model: \_\_\_\_\_  
*Model*  
 Keipilkan katalog berkenaan/*Attach the relevant catalogue*
- (iv) Keupayaan: \_\_\_\_\_ kg.wap/jam  
*Capacity* *kg.steam/hour*
- (v) Nombor siri: \_\_\_\_\_  
*Serial no.*
- (vi) Keluaran kasar: \_\_\_\_\_  
*Gross output*

**C**

**MAKLUMAT BAHANAPI**  
**INFORMATION OF FUEL**

6. Butir-Butir Bahanapi Yang Digunakan  
*Detail of Fuel Used*

- (i) Kadar penggunaan bahanapi: \_\_\_\_\_ kg/jam  
*Rate of fuel consumption* *kg/hr*
- (ii) Jenis bahanapi: \_\_\_\_\_  
*Type of fuel used*
- (iii) Analisa bahanapi (Sertakan spesifikasi bahanapi yang hendak digunakan)  
*Analysis of fuel (Please attach specification of fuel to be used)*
- Kandungan Sulfur: \_\_\_\_\_ %  
*Sulphur content*
- Kandungan abu: \_\_\_\_\_ %  
*Ash content*
- Nilai kasar kalori: \_\_\_\_\_  
*Gross calorific value*
- (iv) Kaedah penyuaipan dan kawalan bahanapi  
*Method of fuel feeding and control*
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## D

**MAKLUMAT CEROBONG**  
**INFORMATION OF CHIMNEY**

7. Butir-Butir Cerobong  
*Details of Chimney*

- (i) Tinggi cerobong yang dicadangkan \_\_\_\_\_ meter  
*Proposed chimney height*  
Nyatakan asas pengiraan yang digunakan \_\_\_\_\_  
*Specify basis of calculation*
- (ii) Garis pusat di bahagian bawah \_\_\_\_\_ meter  
*Diameter at the base* meters
- (iii) Garis pusat di bahagian atas \_\_\_\_\_ meter  
*Diameter at the top* meters
- (iv) Nombor pengenalan pada cerobong yang dicadangkan: \_\_\_\_\_  
*Identification number on the proposed chimney*
- (v) Halaju pelepasan \_\_\_\_\_ (meter/saat, draf paksaan/semulajadi)  
*Efflux velocity* (meters/second, forced/natural draught)
- (vi) Parameter rekabentuk tinggi cerobong  
*Chimney height design parameter*
- (a) Kepilkan cara pengiraan cerobong. Sekiranya ada rancangan pembesaran, tunjukkan kiraan yang digabungkan.  
*Attach calculation of chimney height. If there is plan for future expansion, indicate calculation has been incorporated.*
- Tajuk \_\_\_\_\_ No. Rujukan \_\_\_\_\_  
*Title* *Reference no.*
- (b) Kepilkan lukisan-lukisan yang menunjukkan butir-butir lengkap pembinaan cerobong, takat percontohan gas cerobong dan kemudahan laluan ke takat percontohan tersebut sekiranya bahanapi pepejal digunakan.  
*Attach drawings showing the construction details of chimney, flue gas sampling point and the necessary safe access leading to the sampling point if solid fuel is used.*
- Tajuk \_\_\_\_\_ No. Rujukan \_\_\_\_\_  
*Title* *Reference no.*
- (vii) Suhu pelepasan gas di salur masuk cerobong \_\_\_\_\_ °C  
*(Flue gas temperature at inlet of chimney)*  
di salur keluar cerobong \_\_\_\_\_ °C  
*(at exit of chimney)*
- (viii) Kandungan habuk dalam gas cerobong sebelum kawalan \_\_\_\_\_ g/Nm<sup>3</sup> atau m<sup>3</sup>/hr  
*Flue gas dust content before control* g/Nm<sup>3</sup> atau m<sup>3</sup>/hr

## E

**MAKLUMAT KAWALAN PENCEMARAN**  
**INFORMATION ON CONTROL EQUIPMENT**

8. Huraikan teknikal alat kawalan pencemaran  
*Technical description of pollution control equipment*

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- (i) Jenis/Type: \_\_\_\_\_

(ii) Nama Pembuat: \_\_\_\_\_  
*Manufacturer*

(iii) Model: \_\_\_\_\_  
*Model*

Kepilkan katalog/lukisan alat kawalan  
*Attach catalogue/drawing of control equipment*

Tajuk \_\_\_\_\_  
*Title*

No. Rujukan \_\_\_\_\_  
*Reference no.*

(iv) Kecekapan: \_\_\_\_\_ %  
*Efficiency*

(v) Paras pelepasan habuk: \_\_\_\_\_ g/Nm<sup>3</sup>  
*Level of dust emission*

(vi) Kepilkan cara pengiraan rekabentuk alat perangkap habuk dan asas pilihan alat kawalan tersebut  
*Attach calculation on the design and basis of selection of the dust collector*

Tajuk \_\_\_\_\_  
*Title*

No. Rujukan \_\_\_\_\_  
*Reference no.*

(vii) Pelan pandangan sisi bagi pemasangan alat perangkap habuk  
*Plan showing side elevation of the dust collector*

Tajuk \_\_\_\_\_  
*Title*

No. Rujukan \_\_\_\_\_  
*Reference no.*

(viii) Kepilkan jaminan prestasi dari pembuat alat perangkap habuk  
*Attach performance guarantee from the manufacturer*

9. Kipas  
*Fan*

(i) Jenis kipas: \_\_\_\_\_  
*Type of fan*

(ii) Keupayaan pada suhu tertentu: \_\_\_\_\_ m<sup>3</sup>/min pada \_\_\_\_\_ °C  
*Capacity at specified temperature*

(iii) Tekanan static: \_\_\_\_\_  
*Static pressure*

(iv) Tenaga motor: \_\_\_\_\_ HP  
*Motor output*

10. Keterangan ringkas mengenai penggunaan wap dan kadar penggunaan  
*Brief description of steam uses and rate of steam consumption*

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

11. Kekerapan dan tempoh operasi 'soot blowing' dan 'steam blowdown' dan rancangan mengurangkan pelepasan habuk dan bunyi bising  
*Frequency and duration of soot blowing and steam blowdown operation and proposal to reduce dust emission and noise generation*

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

12. Pencatit ketumpatan asap dan alat kecemasan  
*Smoke density recorder and alarm system*

Jenis: \_\_\_\_\_ Model: \_\_\_\_\_  
*Type Model*

13. Maklumat mengenai lain-lain alat pembakaran bahanapi di premis tersebut  
*Information on other fuel burning equipment within the premises*

| Jenis & Keupayaan<br><i>Type &amp; Capacity</i> | Jenis Bahanapi<br><i>Type of Fuel</i> | Tinggi Cerobong<br><i>Chimney Height</i> | Kadar Penggunaan Bahanapi<br><i>Rate of Fuel Consumption</i> |
|---|---------------------------------------|--|--|
| _____   | _____                                 | _____                                    | _____  |
| _____   | _____                                 | _____                                    | _____  |
| _____   | _____                                 | _____                                    | _____  |

Nyatakan sama ada alat tersebut ‘tunggu sedia’, cerobong gabungan dan lain -lain  
*State the status of the equipment, either standby, combined stack, etc.*

14. Lain-lain cerobong di dalam jarak 100 meter dari cerobong cadangan dan pemu nya  
*Other chimneys within 100 meters of proposed chimney and name of owner*

**F** **PENGAKUAN**  
**DECLARATION**

Saya ..... pemohon/agen\* yang diberi kuasa bagi pemohon, dengan ini mengaku bahawa segala maklumat yang diberi di dalam borang ini adalah benar dan betul sepanjang pengetahuan dan kepercayaan saya.

*I ..... The applicant/authorised agent\* of the applicant, hereby declare that all the information given in this application is to the best of my knowledge and belief true and correct.*

Tarikh; \_\_\_\_\_ Tandatangan pemohon/\*: \_\_\_\_\_  
*Date Agen yang diberi kuasa Signature of applicant/\* Authorised agent*

Telefon/Telephone: \_\_\_\_\_ Nama Penuh: \_\_\_\_\_  
*Full Name*

Faks/Fax: \_\_\_\_\_ Jawatan: \_\_\_\_\_  
*Designation*

Cop Rasmi Syarikat: \_\_\_\_\_  
*Official Stamp of the Company*

Untuk dan bagi pihak: \_\_\_\_\_  
*For and on behalf of:* \_\_\_\_\_

Telefon/Telephone: \_\_\_\_\_ Faks/Fax: \_\_\_\_\_

\* Potong yang mana tidak berkenaan  
*Delete whichever is not applicable*

Semua lukisan hendaklah disahkan oleh seorang jurutera professional berdaftar  
*All drawing shall be certified by a registered professional engineer*

**SENARAI SEMAK PERMOHONAN  
CHECKLIST OF APPLICATION**

| Bil.<br>Bil. | Perkara<br>Subject  | Ada<br>Yes          |                             | Tiada<br>No |
|--------------|---|---------------------|-----------------------------|-------------|
|              |   | Lengkap<br>Complete | Tidak Lengkap<br>Incomplete |             |
| 1.           | Borang AS 16A<br><i>Form AS 16A (typed script)</i>  |                     |                             |             |
| 2.           | Kiraan ketinggian cerobong/'efflux velocity'<br><i>Calculation of chimney height/efflux velocity</i>  |                     |                             |             |
| 3.           | Pelan tapakbina berskil menunjukkan tempat cerobong yang dicadangkan dan bangunan-bangunan dalam lingkungan 1000 meter dan tingginya bangunan tertinggi dalam lingkungan jejari 50 meter<br><i>Site plan of approved scale indicating clearly the location of the proposed chimney and building within 1000 meters and height of the highest building within 50 meters radius</i> |                     |                             |             |
| 4.           | Pelan kedudukan alat pembakaran bahanapi dalam premis kilang<br><i>Plan showing the fuel burning equipment in the premises</i>  |                     |                             |             |
| 5.           | Pelan bangunan (pandangan sisi) yang menunjukkan ketinggian cerobong dengan paras bangunan tertinggi<br><i>Building plan (side view) showing chimney height and the highest building</i>  |                     |                             |             |
| 6.           | Lukisan kejuruteraan cerobong yang disahkan oleh Jurutera Berdaftar<br><i>Engineering drawing of chimney endorsed by a Registered Engineer</i>  |                     |                             |             |
| 7.           | Dokumen/katalog yang berkaitan<br><i>Document/Catalogue of relevant equipment</i>   |                     |                             |             |
| 8.           | Jaminan prestasi<br><i>Performance guarantee</i>  |                     |                             |             |