

THE STANDARD QUALITY OF EMISSION FOR ACTIVITIES OF FERTILIZER INDUSTRY  
(Decree of the State Minister for Environment No. 133/2004 dated August 12, 2004)

THE STATE MINISTER FOR ENVIRONMENT,

Considering:

- a. that since activities of fertilizer industry are potential to cause environmental pollution, emission of activities of the fertilizer industry needs to be controlled;
- b. that according to the provision in Article 8 paragraph (1) of Government Regulation No. 41/1999 (BN No. 6378 pages 1A - 4A and so on) on control over air pollution, a decree of the State Minister for Environment on the standard quality of emission of immovable sources needs to be stipulated;
- c. that based on Decree of the State Minister for Environment No. 13/MENLH/3/1995 (BN No. 5606 pages 11A - 18A) on the standard quality of emission of immovable sources, the standard quality of emission from activities of the fertilizer industry is not regulated specifically;
- d. in connection with the above mentioned matters, a decree of the State Minister for Environment on the standard quality of emission for activities of the fertilizer industry needs to be stipulated;

In view of:

1. Law No. 23/1997 (BN No. 6092 pages 19A - 21A and so on) on environmental management (Statute Book of 1997 No. 68, Supplement to Statute Book No. 68, Supplement to Statute Book No. 3699);
2. Law No. 22/1999 (BN No. 6361 pages 1A - 5A and so on) on regional administration (Statute Book of 1999 No. 60, Supplement to Statute Book No. 3839);
3. Government Regulation No. 27/1999 (BN No. 6442 pages 10A - 12A and so on) on environmental impact analysis (Statute Book of 1999 No. 59, Supplement to Statute Book No. 3838);
4. Government Regulation NO. 41/1999 (BN No. 6378 pages 1A - 4A and so on) on control over air pollution (Statute Book of 1999 No. 86, Supplement to Statute Book No. 3853);
5. Presidential Decree No. 2/2002 on the amendment to Presidential Decree No. 101/2001 on the status, tasks, functions, authority, organizational structures and working arrangements of state ministers;

D E C I D E S :

To stipulate:

THE DECREE OF THE STATE MINISTER FOR ENVIRONMENT ON THE STANDARD QUALITY OF EMISSION FOR ACTIVITIES OF THE FERTILIZER INDUSTRY

Article 1

Referred to in this decree as:

1. Fertilizer Industry is the chemical (synthetic) fertilizer industry producing fertilizers: Ammonium Sulfate (ZA), Urea, Phosphate (SP-36), TSP, Phosphate Acid and by products and Plural NPK.
2. Standard Quality of Emission for activities of fertilizer industry is the maximum limit of emission of fertilizer industry activities allowed to come or supplied into ambient air.
3. Emission is substance, energy and/or other component resulting from an activity, which comes into and/or is supplied into ambient air having and/or not having potential as pollutant.
4. Planning is a designing process so as to be ready to apply physical development to fertilizer industry activities.
5. Abnormal condition is that the operational condition of fertilizer industry activities are not suitable to the normal condition partly or wholly thus exceeding the standard emission.

6. Emergency condition is a condition where equipment damages thus exceeding the standard emission extremely;
7. Minister is the minister in charge of environmental management and environmental impact controlling.
8. Governor is the head of a provincial region;
9. Regent/mayor is the head of regental/municipal region.

#### Article 2

The standard quality of emission for the fertilizer industry activities includes factories of fertilizers: Ammonium Sulfate (ZA), Urea, Phosphate (SP-36), TSP, Phosphate Acid and by products and Plural NPK.

#### Article 3

- (1)The standard quality of emission for the respective fertilizer factories is as follows:
  - a. Ammonium Sulfate (ZA), as contained in Attachments IA and IB;
  - b. Urea, as contained in Attachments IIA and IIB;
  - c. Phosphate (SP-36, TSP), as contained in Attachments IIIA and IIIB;
  - d. Phosphate Acid and by products, as contained in Attachments IVA and IVB;
  - e. Plural-NPK, as contained in Attachment V.
- (2)In the case of the fertilizer factories as meant in paragraph (1) letters a, b, c and d,
  - a. already operating before the stipulation of this decree, the standard quality of emission as meant in Attachments IA, IIA, IIIA, IVA applies and they are obliged to meet the standard quality of emission as meant in Attachments IB, IIB, IIIB, IVB not later than January 1,2009;
  - b. being in the course of planning before the stipulation of this decree and already operating after the stipulation of this decree, the standard quality of emission as meant in Attachments IA, IIA, IIIA, IVA applies and they are obliged to meet the standard quality of emission as meant in Attachments IB, IIB, IIIB, IVB not later than January 1,2009;

- c. being in the course of planning and operating after the stipulation of this decree, the standard quality of emission as meant in Attachments IB, IIB, IIIB, IVB applies.

- (3)The standard quality of emission as meant in Attachment V applies to the fertilizer factories as meant in paragraph (1) letter e after the decision is stipulated.

#### Article 4

Technical guidelines on monitoring of air quality, sampling method and emission analysis are as stipulated in Decision of the Head of the Environmental Impact Analysis Agency No. Kep.205/Bapedal/07/1996 on technical guidelines on control over air pollution of immovable sources.

#### Article 5

- (1)Governors can stipulate additional parameters of the standard quality of emission of fertilizer industry activities in regions other than the parameters as meant in the attachments to this decree after consulting with the minister.
- (2)Governors can stipulate the standard quality of emission of fertilizer industry activities in regions the same as or higher than the provisions as meant in Article 3 paragraph (1).
- (3)In stipulating the standard quality of emission of fertilizer industry activities in regions as meant in paragraphs (1) and (2), governors involve institutions concerned and experts.

#### Article 6

If the environmental impact analysis requires the tighter standard quality of emission of fertilizer industry activities and the standard quality of emission as meant in the attachments to this decree, the standard quality of emission as required in the environmental impact analysis applies to the said activities.

#### Article 7

- (1)Every personnel in charge of business and/or activity of the fertilizer industry as meant in Article 2 is obliged:

**ATTACHMENT IA**

THE STANDARD QUALITY OF EMISSION FOR  
AMMONIUM SULFATE (ZA) FERTILIZER FACTORY

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Drier scrubber	Total particle	500
		Ammonium (NH <sub>3</sub> )	500
2.	Saturator	Ammonium (NH <sub>3</sub> )	500
3.	Exhaust Gas Scrubber	Ammonium (NH <sub>3</sub> )	500
4.	Sulfate Acid Unit	Sulfur Oxide (SO <sub>2</sub> )	1700
5.	Turbine gas/waste heat boiler	Nitrogen Dioxide (NO <sub>2</sub> )	175
6.	All sources	Opacity	40%
7.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1,000
		Opacity	20%

**Note:**

- Nitrogen Dioxide is determined as NO<sub>2</sub>,
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

- a. to provide air pollution controlling facilities and infrastructures covering, among others, emission tunnel accompanied by supporting facilities such as sample taking hole, ladder, platform and electric current as well as other air pollution controlling facilities as stipulated in Decision of the Head of the Environmental Impact Controlling Agency No. 205/Bapedal/07/1996 on technical guidelines on control over air pollution of immovable sources;
- b. to install Continuous Emission Monitoring (CEM) device in certain tunnels with the implementation consulted with the minister and in the case of CEM being not installed, manual measuring must be applied every 6 (six) months;
- c. to monitor the air pollution controlling facilities and infrastructures as meant in letters a and b;
- d. to convey report on results of monitoring as meant in letter b to regents/mayors with a copy made available to governors and minister, every three months for monitoring with automatic equipment;
- e. to convey report on results of monitoring as meant in point b to regents/mayors with a copy made available to governors and minister, every six months for monitoring using manual equipment;
- f. to take necessary actions of settlement in the case of abnormal condition and/or emergency condition causing the standard quality of emission of fertilizer industry activities to be exceeded and promptly report to regents/mayors with a copy made available to governors and the minister.

(2) The results of the reporting as meant in paragraph (1) letters d and e constitute the basis for regents/mayors, governors and minister in stipulating policies in a bid to control air pollution.

**Article 8**

The decree comes into force as from the date of stipulation.

Stipulated in Jakarta

On August 12, 2004

THE STATE MINISTER FOR ENVIRONMENT

Sgd

NABIEL MAKARIM, MPA, MSM

Stipulated in Jakarta

On August 12, 2004

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## ATTACHMENT IB

## ATTACHMENT IIA

THE STANDARD QUALITY OF EMISSION FOR  
AMMONIUM SULFATE (ZA) FERTILIZER FACTORY

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Drier scrubber	Total particle	250
		Ammonium (NH <sub>3</sub> )	250
2.	Saturator	Ammonium (NH <sub>3</sub> )	300
3.	Exhaust Gas Scrubber	Ammonium (NH <sub>3</sub> )	360
4.	Sulfate Acid Unit	Sulfur Oxide (SO <sub>2</sub> )	1000
5.	Turbine gas/ waste heat boiler	Nitrogen Dioxide (NO <sub>2</sub> )	125
6.	All sources	Opacity	20%
7.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1,000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

Stipulated in Jakarta

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THE STANDARD QUALITY OF EMISSION FOR  
UREA FERTILIZER FACTORY

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Primary reformer	Nitrogen dioxide (NO <sub>2</sub> )	1400
2.	Prilling tower Granulation	Total particle	500
		Ammonium (NH <sub>3</sub> )	500
3.	Turbine waste heat broiler	Nitrogen Dioxide (NO <sub>2</sub> )	175
4.	All sources	Opacity	40%
5.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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## ATTACHMENT IIB

THE STANDARD QUALITY OF EMISSION FOR  
UREA FERTILIZER FACTORY

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Primary reformer	Nitrogen dioxide (NO <sub>2</sub> )	700
2.	Prilling tower	Total particle	250
	Granulation	Ammonium (NH <sub>3</sub> )	300
3.	Turbine waste heat broiler	Nitrogen Dioxide (NO <sub>2</sub> )	125
4.	All sources	Opacity	20%
5.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>,
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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## ATTACHMENT IIIA

THE STANDARD QUALITY OF EMISSION OF  
POSTPHATE FERTILIZER FACTORY (SP 36, TSP)

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Storage of mate- rial/Ball Mill	Total particle	400
2.	Reaction Unit	Total particle	400
		Flour	30
3.	Granulation unit	Total particle	400
		Flour	30
4.	All sources	Opacity	20%
5.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1,000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>,
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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On August 12,2004

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## ATTACHMENT IIIB

THE STANDARD QUALITY OF EMISSION OF  
POSTPHATE FERTILIZER FACTORY (SP 36, TSP)

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Storage of material/Ball Mill	Total particle	200
2.	Reaction Unit	Total particle	200
		Flour	10
3.	Granulation unit	Total particle	200
		Flour	10
4.	All sources	Opacity	20%
5.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.

In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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## ATTACHMENT IVA

THE STANDARD QUALITY OF EMISSION OF  
POSTPHATE ACID FACTORY AND BY PRODUCT

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Storage of material/Ball Mill	Total particle	400
2.	Fume scrubber (Phosphate acid)	Flour	30
3.	Gas scrubber (Aluminium flouride)	Total particle	400
		Flour	30
4.	Sulfate acid unit	Sulfur oxide (SO <sub>2</sub> )	1700
5.	Dust scrubber (cement retarder)	Total particle	400
		Flour	30
6.	All sources	Opacity	40%
7.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>2</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>2</sub>
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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## ATTACHMENT IVB

THE STANDARD QUALITY OF EMISSION OF  
POSTPHATE ACID FACTORY AND BY PRODUCT

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Storage of material/Ball Mill	Total particle	400
2.	Fume scrubber (Phosphate acid)	Flour	30
3.	Gas scrubber (Aluminium flouride)	Total particle	400
		Flour	30
4.	Sulfate acid unit	Sulfur oxide (SO <sub>2</sub> )	1700
5.	Dust scrubber (cement retarder)	Total particle	400
		Flour	30
6.	All sources	Opacity	40%
7.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>x</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>x</sub>,
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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## ATTACHMENT V

THE STANDARD QUALITY OF EMISSION OF  
PLURAL-NPK FERTILIZER FACTORY

No	Sources	Parameters	Standard quality of emission
			Unit:mg/NM <sup>3</sup>
1.	Fume scrubber	Total particle	200
		Flour	10
		Ammonium	250
2.	All sources	Opacity	20%
3.	Power boiler	Total particle	230
		Sulfur Dioxide (SO <sub>2</sub> )	800
		Nitrogen Dioxide (NO <sub>x</sub> )	1000
		Opacity	20%

## Note:

- Nitrogen Dioxide is determined as NO<sub>x</sub>,
- Volume of gas in the standard situation (25° C and pressure of 1atm)
- For the measuring of gas, some 7% of oxygen is corrected.
- Opacity is used as practical indicator of monitoring and developed to obtain correlation with total particle observation.
- In the case of factories operating CEM device, they are obliged to meet BME minimally 95% of the normal operation hour for three months.

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