

## **UTILIZZO DI TECNICHE PER IL CORRETTO ABBATTIMENTO DELLE POLVERI DEI CUMULI AL DI SOTTO DELLE COPERTURE**

**(prescrizione al paragrafo 3.1.1 dell’Autorizzazione Integrata Ambientale punto 4)**

La prescrizione contenuta nell’Autorizzazione Integrata Ambientale (AIA) impone di realizzare “edifici chiusi e sistemi di captazione e trattamento di aria filtrata dalle aree per lo stoccaggio di materiale pulverulento in accordo alla BAT n.11, punto III.” Il documento della BAT n.11 al punto III recita:

*11. Le BAT consistono nell’evitare o ridurre le emissioni diffuse di polveri prodotte dallo stoccaggio, dalla movimentazione e dal trasporto di materiali utilizzando una delle tecniche di seguito specificate o una loro combinazione.*

[...]

*III. Tecniche per le attività di consegna, stoccaggio e recupero dei materiali:*

— *sistemazione totale delle tramogge di scarico in un edificio dotato di sistema di captazione di aria filtrata per i materiali polverosi, o tramogge dotate di deflettori di polvere e reti di scarico abbinate a un sistema di pulizia e di captazione delle polveri*

— *limitazione delle altezze di caduta se possibile a un massimo di 0,5 m*

— *utilizzo di acqua nebulizzata (preferibilmente acqua riciclata) per l’abbattimento delle polveri*

— *ove necessario, sistemazione di contenitori di stoccaggio dotati di unità filtranti per controllare le polveri*

— *uso di dispositivi totalmente integrati per il recupero dai contenitori*

— *ove necessario, stoccaggio del rottame in aree coperte e con pavimentazione dura per ridurre il rischio di contaminazione dei terreni (utilizzando la consegna just in time per ridurre al minimo le dimensioni del deposito e quindi le emissioni)*

— *riduzione al minimo della perturbazione dei cumuli*

— *restrizione dell’altezza e controllo della forma generale dei cumuli*

— *stoccaggio all’interno di edifici o in contenitori, anziché in cumuli esterni, se le dimensioni del deposito sono adeguate*

— *creazione di barriere frangivento di terreno naturale, banchi di terra o piantumazione di erba a fili lunghi o di alberi sempreverdi in zone aperte per captare e assorbire le polveri senza subire danni a lungo termine*

— *idrosemina di discariche e di aree di raccolta di scorie*

— *creazione di un'area verde nel sito coprendo le zone inutilizzate con terreno e piantando erba, arbusti e altra vegetazione di copertura del terreno*

— *inumidimento della superficie con sostanze leganti durevoli*

— *copertura della superficie con teloni o trattamento della superficie dei depositi (per esempio, con lattice)*

— *realizzazione di depositi con muri di contenimento per ridurre la superficie esposta*

— *ove necessario, si possono prevedere superfici impermeabili con cemento e canali di drenaggio.*”

L'obiettivo ambientale dell'AIA è quello di evitare la diffusione di polveri, provenienti dai cumuli del materiale stoccato, verso l'ambiente esterno. Per raggiungere questo scopo la prescrizione contenuta nell'AIA fa riferimento al solo primo intervento previsto nell'elenco al punto III, che si riguarda la manipolazione delle tramogge: “— *sistemazione totale delle tramogge di scarico in un edificio dotato di sistema di captazione di aria filtrata per i materiali polverosi, o tramogge dotate di deflettori di polvere e reti di scarico abbinate a un sistema di pulizia e di captazione delle polveri*”; in riferimento tale contesto si cita l'adozione di sistemi ad aria filtrata.

L'indicazione della BAT risulta però assai più ampia, al fine di includere tutti quegli interventi che dovrebbero essere adottati in edifici chiusi di ampie dimensioni e con la presenza di cumuli di dimensione consistente. Nel caso di Ilva la dimensione dei parchi coperti, anche di quelli minori, è tale che appare più efficiente far riferimento ad una serie di interventi quali quelli sottolineati nell'elenco citato testualmente come estratto della BAT n.11. Tali interventi si sostanziano nell'adozione delle seguenti misure:

- 1) lo “stoccaggio all'interno di edifici chiusi” è necessariamente associato alla realizzazione degli interventi di copertura, che limiteranno certamente l'emissione delle polveri nell'atmosfera, così da evitare il trasporto delle polveri in altre parti dell'impianto e nel sito urbano adiacente ai parchi. Quindi, le coperture conseguono certamente l'obiettivo di stoccare il materiale in edifici chiusi e di evitare la dispersione nell'ambiente circostante, poiché le polveri non subirebbero l'azione eolica di dispersione. L'assenza dell'azione del vento sui cumuli consentirà di ridurre al minimo la perturbazione dei cumuli stessi, come previsto dalle BAT;
- 2) la diminuzione dell'umidità relativa causata dall'utilizzo dei sistemi di aspirazione aumenta la presenza di polveri in sollevamento dai cumuli (riferimento 1 della bibliografia - allegato 1);

- 3) Il mantenimento di un ambiente salubre all'interno degli edifici chiusi è certo imprescindibile nel momento in cui gli operatori dovessero entrare in tali ambienti. Questo obiettivo potrà essere raggiunto mediante: inumidimento della superficie con sostanze leganti durevoli (i cosiddetti filmanti), proprio secondo quanto previsto al punto III della BAT 11.

L'adozione di sistemi di inumidimento e filmatura dei cumuli in luogo dei sistemi di aspirazione impone all'impresa un investimento dedicato alla costruzione e alla manutenzione di un adeguato impianto idraulico e di irrorazione, ma consente di migliorare l'impatto ambientale sotto diversi punti di vista:

- l'azione di irrorazione dei cumuli permette di agire con potenze installate inferiori e quindi di diminuire il consumo di energia elettrica;
- l'azione di aspirazione su ambienti molto ampi, quali quelli entro cui sono custoditi i cumuli, potrebbe causare la formazione di fenomeni di turbolenza, che creerebbero proprio quei fenomeni di perturbazione dei cumuli che le BAT desiderano scongiurare (infatti la BAT parla dell'applicazione di questi sistemi di aspirazione per la filtrazione dell'aria solo in aree molto localizzate, come gli spazi intorno alle tramogge e non in prossimità dei cumuli o per ambienti la cui volumetria sia paragonabile a quella delle coperture che Ilva dovrà costruire);
- l'azione dell'acqua nebulizzata in caduta emessa abbatterebbe anche l'eventuale pulviscolo sottile e lo porterebbe rapidamente sulla superficie dei cumuli;
- negli edifici in cui l'impianto di abbattimento delle polveri dovesse accendersi solo in concomitanza dell'ingresso degli operatori, l'azione dell'acqua nebulizzata sarebbe in grado di diminuire la concentrazione di materiale pulverulento in tempi minori rispetto all'impianto di depolverazione.

Quindi per tutto quanto sopra descritto risulta consequenziale che la modifica che si dovrebbe apportare alla prescrizione n° 4 del decreto di riesame dell'AIA dello stabilimento ILVA di Taranto (DVA-DEC-2012-0000547 del 26.10.2012) è certamente una modifica Non Sostanziale, così come definita all'art. 5, comma 1, del D. Lgs. 152/06. Infatti la stessa non produrrebbe effetti negativi e significativi sull'ambiente, invero la stessa permetterà un miglioramento delle prestazioni ambientali che si sarebbero perseguite con l'applicazione pedissequa della prescrizione n. 4. Alla fine si otterrebbe certamente, oltre che un minor consumo di energia elettrica (miglioramento efficienza energetica complessiva), anche l'annullamento delle possibili emissioni diffuse

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provenienti dalle attività legate allo stoccaggio in cumuli dei materiali dei parchi OMO, Nord Coke, AGL Nord/Sud e Calcare, e la realizzazione di nuovi punti di emissione convogliata in atmosfera che comunque si andrebbero ad aggiungere a quelli già esistenti nell'area dello stabilimento.

Milano, 15 aprile 2013



Prof. Ing. Carlo Mapelli

## Bibliografia

1. Peter Werner Grundnig, Wilhelm Höflinger, Gerd Mauschwitz, Zechang Liu, Guiqin Zhang and Zhiqiang Wang, CHINA PARTICUOLOGY Vol. 4, No. 5, 229-233, 2006, “For dust suppression using fine water spray, e.g., dust emitted from falling bulk materials in an enclosed dust chamber, the influence of water spraying flux and relative humidity of the surrounding air on dust emission were investigated. It was found the higher the relative humidity, the lower the needed water flux to reach equal dust suppression. For each relative humidity a certain initial water flux is needed to start the dust suppression. The higher the humidity, the lower the initial water flux, and therefore the overall water consumption. By increasing the water flux, dust suppression starts with higher effect which diminishes with further water flux increase. Above a certain maximum water flux no further dust suppression can be achieved. These relationships were modelled by a mathematical equation which can be used to calculate the dust suppression for different water fluxes and relative humidities.”
2. Federal Register / Vol. 74, No. 194 / Thursday, October 8, 2009 / Rules and Regulations. (allegato 2). page.51954:” BDT (Best Demonstrated Technology) for coal-handling equipment used on subbituminous and lignite coals consists of four technologies—fabric filters, passive enclosure containment systems (PECS), **fogging systems**, and wet extraction scrubbers. BDT for coal-handling equipment processing bituminous coal is the use of chemical suppressants. All of these emissions reduction measures can control PM emissions equally well.” –p.51954:” For open coal storage piles, the fugitive coal dust emissions plan must require that one or more of the following control measures will be used to minimize to the greatest extent practicable fugitive coal dust: locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source”.

**Interessante il dibattito registrato in merito alle tecniche di umidificazione che hanno portato EPA (Environment Protection Agency) rivedere la propria posizione circa i sistemi di abbattimento delle polveri attraverso sistemi di umidificazione p.51966: “E. Coal Processing and Conveying Equipment, Coal Storage Systems, Transfer and Loading Systems, and Open Storage Piles Standards**

**Comment: Many commenters acknowledged EPA’s decision in the supplemental proposal to add fogging systems and passive enclosure containment systems (PECS) to its list of BDT for coal processing and conveying equipment, but stated that EPA’s**

**BDT determination still failed to meet the requirements of CAA § 111. [...] Commenters stated that EPA’s evaluation of technologies for control of fugitive emissions from coal-handling should have included wet suppression. [...]** The commenters believe that the record demonstrates that cost considerations favor the use of wet suppression instead of chemical suppression for controlling fugitive emissions from preparation facilities at coal mines.

**Response: As pointed out by the commenters, EPA has added fogging systems and PECS as technologies representative of BDT for coal-handling equipment processing subbituminous and lignite coals.”**

p.51980:” (2) For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locate the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of paragraph (c)(6) of this section are met), use of a wind barrier, compaction, or use of a vegetative cover.”

# INFLUENCE OF AIR HUMIDITY ON THE SUPPRESSION OF FUGITIVE DUST BY USING A WATER-SPRAYING SYSTEM

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**Abstract** One of the main origins of fugitive dust emission arises from bulk handling in quarries or mines, in particular, from bulk materials falling from a hopper or a conveyor belt. Water-spraying systems, using two-phase nozzles, are one of the methods to suppress such dust emission. In this work we tried to develop a mathematical model to correlate air humidity, water flux through the nozzle and the dust (in particular PM10) emission, in order to improve the application and efficiency of these systems. Sand from the Yellow River in China was dropped from a conveyor belt into a dust chamber at  $1 \text{ kg}\cdot\text{min}^{-1}$ , wherefrom the emitted dust was sucked off and quantified via a cascade impactor. A two-phase nozzle was installed in the dust chamber with a water flux through the nozzle of  $1.2$  to  $3 \text{ L}\cdot\text{h}^{-1}$ , whereas the relative air humidity changed between 55 and 73%. Dust emission was found to be linearly dependent on relative air humidity. Furthermore model equations were developed to describe the dependence of PM10 emission on water flux and relative air humidity.

**Keywords** dust suppression, spraying system, air humidity, water flux, bulk solids, fugitive dust emission

## 1. Introduction

Investigations in the 1990's on sources of dust emission revealed an increase of emission from fugitive sources as compared to point sources (VDI 3790 Blatt 3, 1999). One of the main origins of fugitive dust emission arises from bulk handling in quarries or mines, in particular, from bulk materials falling from a hopper or a conveyor belt (Höflinger, n.d.). Reducing dust emission of falling bulk materials by using water has engendered much interest for scientific investigation, such as moistening the particles before dropping (Plinke et al., 1991 & 1995; Visser, 1991; Trenker & Höflinger, 2001) or using one-phase nozzles to produce a water spray that agglomerates the fine dust particles (Brabec, 1990).

A water spray consisting of a larger number of small droplets presents larger surface area than a water spray of equal liquid volume but with large droplets, thus capable of contacting and removing dust with greater efficiency (Gaunt, 2003). One often uses two-phase water-air nozzles to create such a spray of fine droplets, which require, however, low air pressure (1/10 that for one-phase nozzles) and low water consumption (generally less than 1 litre per hour per nozzle), and possess several further advantages:

- low pressure - lighter equipment and less energy
- low water flux - less moisture in the material
  - less costs for fresh and waste water
  - easier application in the laboratory
- variation of droplet size without changing the water flux
- small droplets for low water flux

Exposed to the environment, the performance and efficiency of dust removal by using water spraying is affected by temperature and relative humidity. But unfortunately no

methods and no calculation equations are yet available for the optimal design of a spraying device for dust reduction. To develop such methods it is necessary to clarify the basic relationship between the dust reduction achieved and the design and operation parameters of the nozzle equipment, their appropriate position inside the enclosed dust area of the falling bulk solids and the volume of the air stream being sucked off. For a given nozzle with a fixed position in an enclosed dust area and a constant air stream, the influence of the water flux through the nozzle and the relative humidity should first be investigated and model equations to describe these relationships should be derived. For this purpose a laboratory bulk falling test apparatus was built for the necessary experimental investigations.

## 2. Laboratory Bulk Falling Apparatus and Measurement Equipment

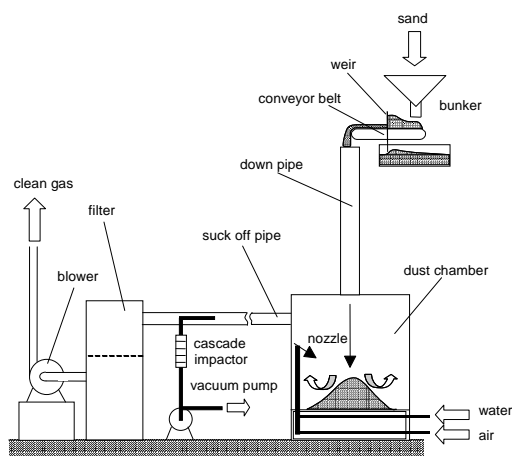


Fig. 1 Test equipment.

The bulk solids (sand from Yellow River) are stored in a bunker above a conveyer belt. In order to obtain constant material feed to the down pipe the bulk solids have to pass a weir, where they are piled up (see Fig. 1). Upon reaching a certain height above the weir excess sand drops into a box below the bin.

The sand passing the weir falls through the down pipe into a dust chamber, where the generated dust is sucked off and the particle concentration and size distribution are measured isokinetically in the suck-off pipe using a cascade impactor (VDI 2066 Blatt 5, 1994) of Chinese manufacture.

To minimize dust emission a two-phase water-air nozzle is installed in the dust chamber. This nozzle is characterised by low air pressure and low water flux while delivering fine droplets.

The design of the nozzle (Düse 1005, VSR Industrietechnik, Germany), is shown in Fig. 2. The air streaming through the centre of the nozzle causes sufficient resonance to mix with the surrounding water. Both, the resonance and the pressure drop from the inside of the nozzle to the outside, reduce the water droplet size.

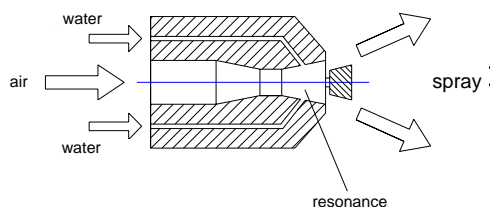


Fig. 2 Two phase water-air nozzle.

Figure 3 shows the position of the spraying nozzle in the dust chamber, inclined to the path of the dropping sand by  $7^\circ$  and 87 cm above the sand drop plate. The centre of the spray on the drop plate coincides with the centre of the falling sand.

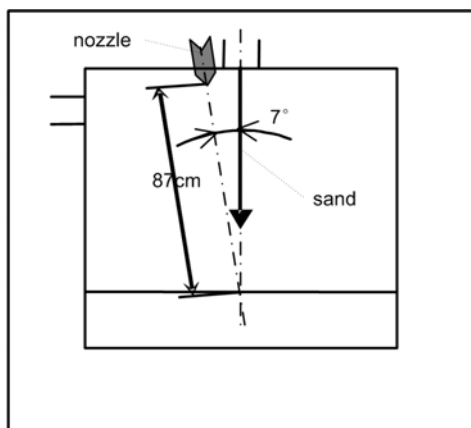


Fig. 3 Position of the spraying nozzle.

Both the mass flow of sand to the dust chamber and the water flux through the nozzle must be adjusted in the range of right proportions, particularly to avoid too much sand flow to lead to too high dust emission to be properly measured by the cascade impactor. The optimal combina-

tion was as follows:

Sand mass flow	-	$1 \text{ kg}\cdot\text{min}^{-1}$
Water flux	-	$1.2 \text{ to } 3 \text{ L}\cdot\text{h}^{-1}$

The limited capacity of the cascade impactor limited the running time for one test to 5 to 10 minutes (corresponding to 5 to 10 kg of sand dropped into the dust chamber). The air pressure for the two-phase nozzle was 3 bars. Table 1 shows the droplet size distribution under these conditions (VSR Industrietechnik, 2006).

Table 1 Droplet size distribution of the two-phase nozzle

Water flux / $\text{L}\cdot\text{h}^{-1}$	$x_{10,3} / \mu\text{m}$	$x_{50,3} / \mu\text{m}$	$x_{90,3} / \mu\text{m}$
1.2	11	19	32
3	11	21	37

### 3. Bulk Material

The bulk material, sand from Yellow River, with a characteristically high amount of particles below  $10 \mu\text{m}$ , was first dried down to  $\sim 0.8 \text{ m}\%$  water content, and then stored in 14 airtight barrels. For each test, a mixture of sand from all barrels was used to prevent varying particle size distribution and varying moisture content. Fig. 4 shows the cumulative mass particle size distribution of the Yellow River sand used in the experiments.

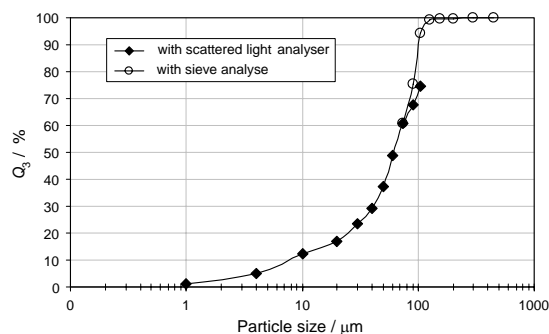


Fig. 4 Cumulative mass particle size distribution  $Q_3$  of Yellow River sand.

### 4. Experimental Investigations

The falling bulk mass flow was kept constant at  $1 \text{ kg}\cdot\text{min}^{-1}$ , and the water flux was varied between 1.2 to  $3 \text{ L}\cdot\text{h}^{-1}$ .

As the air entering the dust chamber was not air conditioned, the relative air humidity depended on the local weather condition. The temperature remained almost constant at  $20^\circ \pm 1^\circ\text{C}$ . After a certain test time to measure the dust mass using the cascade impactor, the PM10 value was calculated, to relate the collected dust mass below an aerodynamic diameter of  $10 \mu\text{m}$  to the fallen sand mass ( $\text{mg dust}\cdot\text{kg}^{-1} \text{ sand}$ ). Fig. 5 shows that the dust emission can obviously be reduced by increasing the water flux as well as by raising the air humidity. Noticeable is the linear dependence of dust emission on relative air humidity. These data were further used for interpolation to get emission/water flux curves for fixed relative humidities as



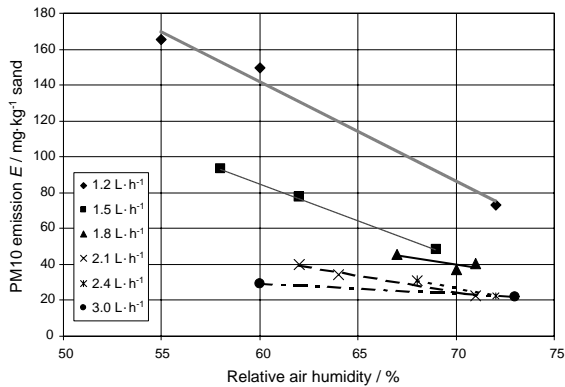


Fig. 5 PM10 emission E versus relative air humidity for different water flux.

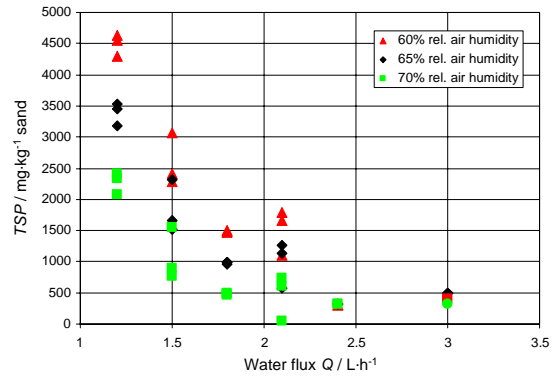


Fig. 8 TSP versus water flux Q.

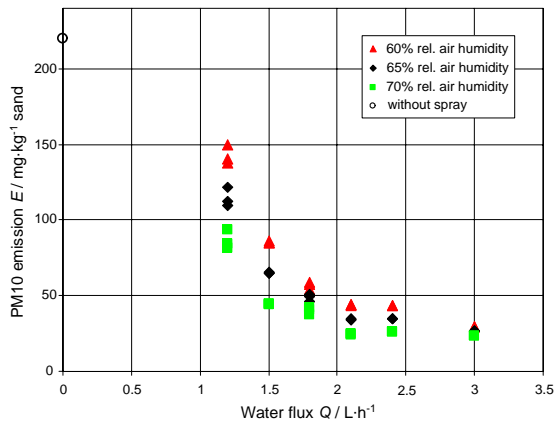


Fig. 6 PM10 emission E versus water flux Q for different relative air humidities.

shown in Fig. 6, inclusive of the PM10 value without water spraying for comparison.

As some water droplets, coming out of the nozzle, were consumed through evaporation before reaching the falling sand, actual dust reduction started only thereafter. For higher air humidity water evaporates slower, causing less such initial loss of water. Thereafter increasing the water flux further reduced the dust emission. The reducing effect versus water flux added is stronger for higher than for lower dust emission concentrations. As the dust emission decreases further, water flux increase has no additional

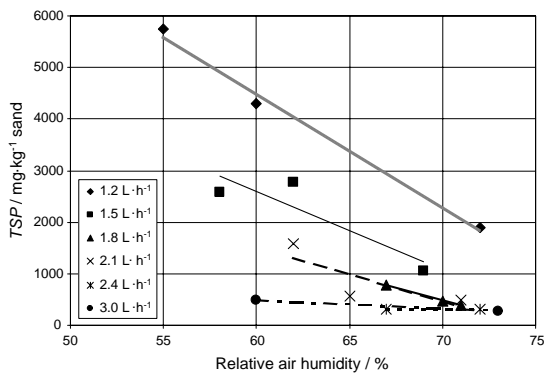


Fig. 7 TSP versus relative air humidity.

dust suppression effect. Above a certain water flow further increase has no effect on dust suppression and the dust emission remains constant. This remaining residual dust emission comes from dust areas in the chamber which are not reached by the water spray. In Figs. 7 and 8 analogous measurements are shown for TSP (Total Suspended Particulates) concentrations and the experimental results confirm the above considerations also for TSP.

### 5. Development of Model Equations

To provide a tool for optimising the necessary water flux, the emission-versus-water flux data in Fig. 6 were formulated into a mathematical model. Following the modelling of deep-bed filtration (Luckert, 2004) the following kinetic equation is proposed to describe the reduction of particle concentration  $dc$  over the thickness  $dz$  of the filter cake (the larger the thickness the better the concentration reduction):

$$\frac{dc}{dz} = -\lambda_d \cdot c, \tag{1}$$

where the proportional factor  $\lambda_d$  means that particle reduction is proportional to its concentration  $c$ . This mathematical relationship can be interpreted alternately as the dust particle reduction mechanism caused by water spray. The number of filter grains which form the deep bed filter layer has a similar function to the particle separation as the stationary mass of water dispersed in the dust chamber generated by the water spray. If the water spray flow  $Q$  is increased the stationary mass of dispersed water in the dust chamber will be increased too. Therefore the filter layer thickness  $z$  in Eq. (1) can be replaced by the water flow  $Q$ , and the particle concentration  $c$  is replaced by the PM10 emission  $E$ .

Starting with  $E_0$  for the emission without water spray,  $E_{res}$  for the residual emission for high water flux,  $Q$  for the water flux and  $Q_0$  for the initial water flux which is necessary to start the reduction of the PM10 emission, Eq. (1) can be modified into the following model:

$$\frac{d(E - E_{res})}{dQ} = -\lambda \cdot (E - E_{res}). \tag{2}$$

Integration yields

$$\ln(E - E_{res}) = -\lambda \cdot Q + C \tag{3}$$

From the initial conditions,  $Q_0$  and  $E_0$ , the value of the constant  $C$  can be derived:

$$Q = Q_0 \rightarrow C = \ln(E_0 - E_{res}) + \lambda \cdot Q_0 \tag{4}$$

Substitution of  $C$  gives the two alternate forms of the final model:

$$\ln\left(\frac{E - E_{res}}{E_0 - E_{res}}\right) = -\lambda \cdot (Q - Q_0) \tag{5}$$

$$E = E_{res} + (E_0 - E_{res}) \cdot e^{-\lambda \cdot (Q - Q_0)} \tag{6}$$

where  $\lambda$  is an empirical factor which controls the emission reduction. While in deep-bed filtration  $\lambda_d$  depends on the filter material (grain size, porosity, etc.), for our present case  $\lambda$  denotes the influence of the water spray (droplet size, dispersion of the droplets in the dust chamber, etc.).

Figure 9 shows schematically the above model considerations in terms of three curves representing different relative air humidities, which need different initial water mass and therefore have different starting points for their dust suppression.

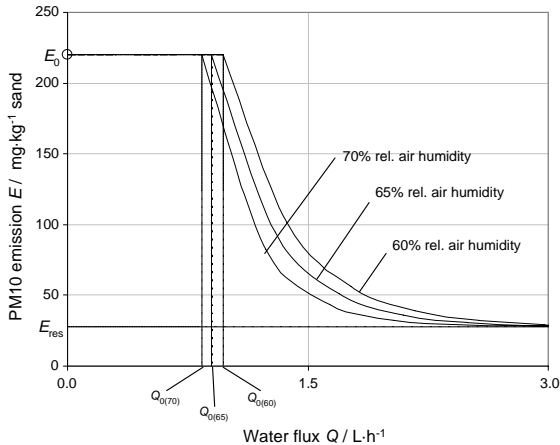


Fig. 9 Parameters of the mathematical model.

By reading out the values for the emission without water spray  $E_0$  and the residual emission  $E_{res}$  from the experimental data in Fig. 6, the parameters  $\lambda$  and  $Q_0$  can be found by regression of the experimental data using Eq. (5), as shown in Table 2 and Fig. 10. It can be seen that the model fits the experimental values well.

Table 2 Values of model parameters, determined by regression

$E_{res}$ / mg·kg <sup>-1</sup> sand	$E_0$ / mg·kg <sup>-1</sup> sand	rel. air humidity / %	$Q_0$ / L·h <sup>-1</sup>	$\lambda$ / L <sup>-1</sup> ·h
27.9	220	60	0.97	2.4
		65	0.89	2.6
		70	0.84	3.1

Equation (6) together with the process specific parameters can be used to estimate the dust suppression effect for different water fluxes. In further scientific investigations the influence of different nozzle parameters (resulting in different droplet sizes, droplet dispersion grade, etc.) and the

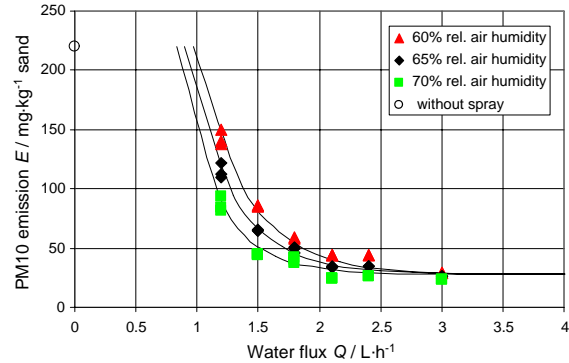


Fig. 10 PM10 emission  $E$  versus water flux  $Q$  including model equations.

position of the nozzle in the chamber on  $\lambda$  and  $Q_0$  will be further clarified.

## 6. Conclusion

For dust suppression using fine water spray, e.g., dust emitted from falling bulk materials in an enclosed dust chamber, the influence of water spraying flux and relative humidity of the surrounding air on dust emission were investigated. It was found the higher the relative humidity, the lower the needed water flux to reach equal dust suppression. For each relative humidity a certain initial water flux is needed to start the dust suppression. The higher the humidity, the lower the initial water flux, and therefore the overall water consumption. By increasing the water flux, dust suppression starts with higher effect which diminishes with further water flux increase. Above a certain maximum water flux no further dust suppression can be achieved. These relationships were modelled by a mathematical equation which can be used to calculate the dust suppression for different water fluxes and relative humidities.

## Nomenclature

- $C$  constant, -
- $c$  particle concentration, kg·m<sup>-3</sup>
- $E$  PM10 emission, mg·kg<sup>-1</sup> sand
- $E_0$  PM10 emission without water spraying, mg·kg<sup>-1</sup> sand
- $E_{res}$  residual PM10 emission, mg·kg<sup>-1</sup> sand
- PM10 particulate matter 10 microns, mass of particles with an aerodynamic diameter of less than 10 microns, mg·kg<sup>-1</sup> sand
- $Q$  water flux, L·h<sup>-1</sup>
- $Q_0$  initial water flux to start the dust reduction, L·h<sup>-1</sup>
- $Q_3$  cumulative particle mass, %
- TSP total suspended particulates, mg·kg<sup>-1</sup> sand
- $\lambda$  emission reduction factor, L<sup>-1</sup>·h
- $\lambda_d$  proportional factor for deep bed filtration, m<sup>-1</sup>
- $z$  filter layer thickness, m

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# Federal Register

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**Thursday,  
October 8, 2009**

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**Part II**

## **Environmental Protection Agency**

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**40 CFR Part 60  
Standards of Performance for Coal  
Preparation and Processing Plants; Final  
Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 60**

[EPA-HQ-OAR-2008-0260; FRL-8965-3]

RIN 2060-AO57

**Standards of Performance for Coal Preparation and Processing Plants**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** EPA is promulgating amendments to the new source performance standards for coal preparation and processing plants. These final amendments include revisions to the emission limits for particulate matter and opacity standards for thermal dryers, pneumatic coal cleaning equipment, and coal handling equipment (coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems) located at coal preparation and processing plants. These revised limits apply to affected facilities that commence construction, modification, or reconstruction after April 28, 2008. The amendments also establish a sulfur dioxide (SO<sub>2</sub>) emission limit and a combined nitrogen oxide (NO<sub>x</sub>) and carbon monoxide (CO) emissions limit for thermal dryers located at coal preparation and processing plants. In addition, the amendments establish work practice standards to control fugitive coal dust emissions from open storage piles located at coal preparation and processing plants. The SO<sub>2</sub> limit, the NO<sub>x</sub>/CO limit, and the work practice standards apply to affected facilities that commence construction, modification, or reconstruction of which commences after May 27, 2009. We are also modifying the definition of thermal dryer to include both direct contact and indirect contact thermal dryers drying all coal ranks. We are modifying the definition of pneumatic coal-cleaning equipment to include equipment cleaning all coal ranks. We are also amending the definition of coal for purposes of subpart Y to include coal refuse. The modified definitions of thermal dryer, pneumatic coal cleaning

equipment, and coal will be used to determine whether and how the standards apply to facilities that commence construction, modification, or reconstruction after May 27, 2009.

**DATES:** This final rule is effective on October 8, 2009. The incorporation by reference of certain publications listed in the regulation is approved by the Director of the Federal Register as of October 8, 2009.

**ADDRESSES:** EPA has established a docket for this action which is Docket ID No. EPA-HQ-OAR-2008-0260. All documents in the docket are listed in the <http://www.regulations.gov> index. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the EPA Docket Center, Standards of Performance for Coal Preparation and Processing Plants Docket, EPA West, Room 3334, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Docket Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** Ms. Mary Johnson, Energy Strategies Group, Sector Policies and Programs Division (D243-01), U.S. EPA, Research Triangle Park, NC 27711, telephone number (919) 541-5025, facsimile number (919) 541-5450, electronic mail (e-mail) address: [johnson.mary@epa.gov](mailto:johnson.mary@epa.gov).

**SUPPLEMENTARY INFORMATION:** The supplementary information presented in this preamble is organized as follows:

- I. General Information
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  - B. Where Can I Get a Copy of This Document?
  - C. Judicial Review
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  - A. Affected Facilities
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  - A. Regulated Pollutants
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  - A. What Are the Primary Air Impacts?
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- VI. Statutory and Executive Order Reviews
  - A. Executive Order 12866: Regulatory Planning and Review
  - B. Paperwork Reduction Act
  - C. Regulatory Flexibility Act
  - D. Unfunded Mandates Reform Act
  - E. Executive Order 13132: Federalism
  - F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
  - G. Executive Order 13045: Protection of Children From Environmental, Health and Safety Risks
  - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
  - I. National Technology Transfer Advancement Act
  - J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
  - K. Congressional Review Act

**I. General Information**

*A. Does This Action Apply to Me?*

Categories and entities potentially regulated by the final amendments to New Source Performance Standards (NSPS) for Coal Preparation and Processing Plants (40 CFR part 60, subpart Y) include:

Category	NAICS code <sup>1</sup>	Examples of regulated entities
Industry .....	212111 .....	Bituminous Coal and Lignite Surface Mining.
	212112 .....	Bituminous Coal Underground Mining.
	221112 .....	Fossil Fuel Electric Power Generation.
	212113 .....	Anthracite Mining.
	213113 .....	Support Activities for Coal Mining.
	322121 .....	Paper (except Newsprint) Mills.
	324199 .....	All other petroleum and coal products manufacturing.
	325110 .....	Petrochemical Manufacturing.

Category	NAICS code <sup>1</sup>	Examples of regulated entities
Federal Government .....	327310 .....	Cement Manufacturing.
	331111 .....	Iron and Steel Mills.
	22112 .....	Fossil fuel-fired electric utility steam generating units owned by the Federal Government.
State/local/Tribal government .....	22112 .....	Fossil fuel-fired electric utility steam generating units owned by municipalities.
	921150 .....	Fossil fuel-fired electric steam generating units in Indian Country.

<sup>1</sup> North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this final action. To determine whether your facility would be regulated by this final action, you should examine the applicability criteria in 40 CFR 60.250 and definitions in § 60.251 (subpart Y). If you have any questions regarding the applicability of this final action to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

#### B. Where Can I Get a Copy of This Document?

In addition to being available in the docket, an electronic copy of this final action is available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at <http://www.epa.gov/ttn/oarpg>. The TTN provides information and technology exchange in various areas of air pollution control.

#### C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit by December 7, 2009. Under section 307(b)(2) of the CAA, the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Section 307(d)(7)(B) of the CAA further provides that “[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review.” This section also provides a mechanism for us to convene a proceeding for reconsideration, “[i]f the person raising an objection can demonstrate to EPA that it was impracticable to raise such objection within [the period for public

comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.” Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

#### II. Background Information on Subpart Y

NSPS implement CAA section 111(b) and are issued for categories of sources which have been identified as causing, or contributing significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The primary purpose of the NSPS are to help States attain and maintain ambient air quality by ensuring that the best demonstrated emission control technologies are installed as the industrial infrastructure is modernized. Since 1970, the NSPS have been successful in achieving long-term emissions reductions in numerous industries by assuring cost-effective controls are installed on new, reconstructed, and modified sources.

CAA section 111 requires that the NSPS reflect the degree of emission limitation achievable through application of the best system of emissions reductions which (taking into consideration the cost of achieving such emissions reductions, any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated. This level of control is commonly referred to as best demonstrated technology (BDT). Standards of performance for coal preparation plants (40 CFR part 60, subpart Y) were promulgated in the

**Federal Register** on January 15, 1976 (41 FR 2232). The standards are applicable to facilities which process more than 181 megagrams (Mg) (200 tons) of coal per day that commenced construction, reconstruction, or modification after October 24, 1974.

CAA section 111(b)(1)(B) requires EPA to periodically review and revise the standards of performance, as necessary, to reflect improvements in methods for reducing emissions. The first review of the coal preparation plants NSPS was completed on April 14, 1981 (46 FR 21769). The second review of the coal preparation plants NSPS was completed on April 3, 1989 (54 FR 13384). EPA did not make changes to the NSPS as a result of either review.

We proposed amendments to the coal preparation plants NSPS on April 28, 2008 (73 FR 22901) as a result of the current review. We received a total of 42 comments from coal preparation plants, industry trade associations, control technology vendors, environmental groups, and State environmental agencies during the comment period. After reviewing those comments and considering additional data, EPA decided to publish a supplemental proposal which revised some of the emission limits and monitoring requirements proposed on April 28, 2008, added additional limits, and applied the requirements to additional affected facilities. The supplemental action was proposed on May 27, 2009 (74 FR 25304). A total of 44 comments were received from coal preparation plants, other types of industrial facilities, industry associations, environmental groups, and State environmental agencies. This final rule reflects our consideration of all the comments we received regarding the April 2008 and May 2009 proposals. Detailed responses to the comments not included in this preamble are contained in the Summary of Public Comments and Responses document which is included in the docket for this rulemaking.

### III. Summary of the Final Amendments to Subpart Y and Changes Since Proposal

#### A. Affected Facilities

Subpart Y regulates affected facilities located at coal preparation and processing plants which process more than 181 megagrams (Mg) (200 tons) of coal per day. A coal preparation and processing plant begins at the first hopper (*i.e.*, drop point) used to unload coal and ends at the load-out (*i.e.*, distribution) of the coal either to a method of transportation (*e.g.*, truck, train) or to the end-use piece of equipment (*e.g.*, boiler).

The affected facilities regulated by this final rule are thermal dryers, pneumatic coal-cleaning equipment, coal processing and conveying equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and open storage piles. This final rule expands applicability of the existing NSPS by revising the definitions of thermal dryers, pneumatic coal-cleaning equipment, and coal. It also establishes work practice standards for open storage piles. The final rule amends the definition of thermal dryer for units constructed, reconstructed, or modified after May 27, 2009, to include both direct and indirect dryers drying all coal ranks (*i.e.*, bituminous, subbituminous, lignite, and anthracite coals) and coal refuse. The final rule regulates emissions of SO<sub>2</sub> and NO<sub>x</sub>/CO only from thermal dryers that receive thermal input from the combustion of coal, coal refuse, or residual oil; PM and opacity are regulated from all thermal dryers.

The emissions standards for thermal dryers apply to emissions from the heat source for an indirect thermal dryer only if those emissions are not otherwise regulated under another NSPS. Indirect thermal dryers use a heat transfer medium to supply heat and blow air over the coal to evaporate the water. If the source of heat (the source of combustion or furnace) is subject to another subpart of Part 60, then the furnace and the associated emissions are not considered part of the subpart Y affected facility (*i.e.*, the thermal dryer). However, if the source of heat is not subject to another subpart of Part 60, then the furnace and the associated emissions are part of the subpart Y affected facility. In situations where the source of heat is part of the affected facility and its exhaust is combined with the dryer exhaust in a single stack, the combined exhaust is subject to all subpart Y requirements applicable to the thermal dryer exhaust. However, in situations where the furnace is part of

the affected facility and its exhaust is not combined with the dryer exhaust, the subpart Y requirements for thermal dryers apply differently to the dryer exhaust and the combustion (*i.e.*, heat source or furnace) exhaust. All of the thermal dryer requirements of subpart Y apply to the combustion exhaust, whereas, only a subset of the subpart Y requirements for thermal dryers apply to the dryer exhaust. In addition, thermal dryers that use residual or waste heat from the combustion of coal, coal refuse, or residual oil, or that obtain all of their thermal input from gaseous fuels (*e.g.*, blast furnace gas, coke oven gas, natural gas) or distillate oil also are only be subject to certain subset of the subpart Y requirements for thermal dryers.

Further, a thermal dryer that is part of an in-line coal mill at a Portland cement manufacturing plant where all of the thermal input is supplied by cement kiln exhaust or clinker cooler exhaust, is not subject to the requirements in subpart Y, but, rather, must meet the applicable requirements in the appropriate Portland Cement kiln regulations (40 CFR 60 subpart F and 40 CFR 63 subpart LLL). The amended subpart Y emissions limits for thermal dryers apply to new, reconstructed, or modified thermal dryers at Portland cement manufacturing plants in situations where the thermal input is not supplied by cement kiln or clinker cooler exhaust. Other subpart Y affected facilities located at Portland cement manufacturing plants (*e.g.*, storage systems, conveyors) are also subject to the requirements of subpart Y. Similarly, a coal thermal dryer at an integrated iron or steel manufacturing plant where all of the thermal input is provided by process gases is not regulated under subpart Y, but, rather, under 40 CFR part 60 standards for integrated iron and steel manufacturing plants. Again, the amended emissions limits apply to new, reconstructed, or modified thermal dryers at integrated iron and steel manufacturing plants only in situations where the thermal input is not supplied by process gases. Other subpart Y affected facilities located at integrated iron and steel manufacturing plants also are subject to subpart Y. If an affected facility under subpart Y uses waste-heat or process gases from a process that is subject to emission limits under another NSPS or national emission standard for hazardous air pollutant (NESHAP), the process using the waste-heat or process gases is not subject to requirements under subpart Y, but, rather, is subject to the other applicable NSPS or NESHAP.

This final rule also amends the definition of pneumatic coal-cleaning equipment for units constructed after May 27, 2009, to include pneumatic coal-cleaning equipment cleaning all coal ranks. Finally, the final rule establishes work practice standards that apply to open storage coal piles constructed, reconstructed or modified after May 27, 2009.

#### B. Emission Limits

This action promulgates emission limits applicable to certain thermal dryers constructed, reconstructed, or modified after April 28, 2008. It also promulgates emission limits for additional pollutants applicable to certain thermal dryers constructed, reconstructed, or modified after May 27, 2009.

Direct-contact thermal dryers that use coal, coal refuse, or residual oil as the dryer heat source and are constructed, reconstructed, or modified after April 28, 2008, are subject to emission limits for PM and opacity. Indirect thermal dryers constructed, reconstructed, or modified after May 27, 2009, are subject to the same PM and opacity limits as direct-contact thermal dryers. Both direct-contact thermal dryers and indirect thermal dryers constructed, reconstructed, or modified after May 27, 2009, are subject to an SO<sub>2</sub> emission limit and a combined NO<sub>x</sub>-CO emissions limit. In certain instances, thermal dryers are not subject to the SO<sub>2</sub> and/or NO<sub>x</sub>-CO emission limits. Thermal dryers constructed, reconstructed or modified after May 27, 2009, for which all of the thermal input is supplied from a source other than coal, coal refuse, or residual oil (*i.e.*, thermal input is from gaseous fuels such as blast furnace gas, coke oven gas, or natural gas, or distillate oil) are not subject to SO<sub>2</sub> or NO<sub>x</sub>-CO emission limits. Indirect thermal dryers constructed, reconstructed, or modified after May 27, 2009, that use residual or waste heat from the combustion of coal, coal refuse, or residual oil also are not subject to the emission limits for SO<sub>2</sub> or NO<sub>x</sub>-CO.

Indirect thermal dryers that receive all of their thermal input from a source subject to an SO<sub>2</sub> limit, or NO<sub>x</sub> and/or CO limit, under another Part 60 NSPS are not subject to emission limits under subpart Y for those pollutants (*e.g.*, indirect thermal dryers for which the source of heat is subject to a boiler NSPS (subpart Da, Db, or Dc)). In that instance, the furnace (*i.e.*, source of thermal input) and the associated emissions are not considered part of the subpart Y thermal dryer facility. However, if the source of heat is not

subject to another Part 60 NSPS, then the furnace and the associated emissions are part of the subpart Y thermal dryer facility. In the instance where the furnace is part of the affected facility and its exhaust is combined with the thermal dryer exhaust, the combined exhaust contains all of the applicable pollutants (*i.e.*, PM, opacity, SO<sub>2</sub>, NO<sub>x</sub>, and CO) and all of the subpart Y requirements regarding those emissions from thermal dryers apply. However, in the instance where the furnace is part of the affected facility, but its exhaust is not combined with the dryer exhaust, the furnace exhaust and dryer exhaust are subject to different requirements. The furnace exhaust is subject to emission limits for PM, opacity, SO<sub>2</sub>, and NO<sub>x</sub>-CO. The dryer exhaust, however, is only subject to the PM and opacity limits because the exhaust does not contain SO<sub>2</sub>, NO, and CO.

#### 1. PM and Opacity Limits for Thermal Dryers

Thermal dryers constructed, reconstructed, or modified after April 28, 2008, are subject to emission limits for PM and opacity. The PM and opacity limits in the final rule for new thermal dryers are the same as those proposed in May 2009. EPA determined that thermal dryers undergoing reconstruction could undergo the conversions necessary to also comply with the PM and opacity limits that reflect BDT for new thermal dryers (*i.e.*, fabric filter-controlled recirculation thermal dryers and fabric filter-controlled indirect thermal dryers). Thus, the final rule subjects new and reconstructed thermal dryers to a PM limit of 0.023 grams per dry standard cubic meter (g/dscm)(0.010 grains per dry standard cubic foot (gr/dscf)) and an opacity limit of less than 10 percent. The final rule requires modified thermal dryers to continue to comply with the 1976 rule's PM limit of 0.070 g/dscm (0.031 gr/dscf) and the 1976 rule's opacity limit of less than 20 percent. These limits can be achieved using the technology that EPA determined constitutes BDT for modified thermal dryers (*i.e.*, venturi scrubbers).

#### 2. SO<sub>2</sub>, NO<sub>x</sub>, and CO Limits for Thermal Dryers

Thermal dryers constructed, reconstructed, or modified after May 27, 2009, must either limit their SO<sub>2</sub> emissions to 85 nanograms per Joule (ng/J) (0.20 pounds per million British thermal units (lb/MMBtu)), or achieve a 90 percent reduction of potential SO<sub>2</sub> emissions and limit their SO<sub>2</sub> emissions to no more than 520 ng/J (1.2 lb/

MMBtu). The percent reduction requirement has been revised from the 50 percent requirement proposed in May 2009 to 90 percent in the final rule. In the May 27, 2009, supplemental proposal, EPA concluded that dry sorbent injection into the thermal dryer and spraying caustic onto the coal prior to the thermal dryer were both BDT for SO<sub>2</sub> reduction (74 FR 25310). We also indicated that we were considering an SO<sub>2</sub> percent reduction requirement of between 50 and 90 percent for the final rule (74 FR 25311). We have reassessed the available SO<sub>2</sub> data and believe that the limits established in the final rule are appropriate for new, reconstructed, and modified thermal dryers. Based on our reassessment, we determined that BDT for modified and reconstructed thermal dryers is a wet scrubber with a scrubbing reagent (*e.g.*, an upgraded venturi scrubber with sodium hydroxide or packed bed scrubber with lime). For new thermal dryers, we determined that BDT for controlling SO<sub>2</sub> emissions is the injection of sodium hydroxide directly to the venturi scrubber fluid or injection of a sodium-based sorbent into the combustion gases prior to the drying chamber. All three of these technologies are capable of achieving 90 percent SO<sub>2</sub> reduction.

In the May 27, 2009, supplemental proposal, EPA determined that BDT for controlling NO<sub>x</sub> emissions from new, reconstructed, and modified thermal dryers is combustion controls (*e.g.*, low NO<sub>x</sub> burners, staged combustion, co-firing with natural gas or liquefied petroleum gas, and flue gas recirculation). BDT for controlling CO emissions was determined to be good combustion practices (*e.g.*, ensuring that there is sufficient oxygen in the combustion zone, maintaining appropriate combustion zone temperature and gas residence time, and conducting proper operation and maintenance of the dryer). For affected thermal dryers that commence construction, reconstruction, or modification after May 27, 2009, the final NO<sub>x</sub>-CO emissions limits are the same as those proposed in May 2009. Reconstructed and modified thermal dryers are required to comply with a combined NO<sub>x</sub>-CO limit of 430 ng/J (1.0 lb/MMBtu). New thermal dryers are required to comply with a NO<sub>x</sub>-CO limit of 280 ng/J (0.65 lb/MMBtu).

#### 3. PM and Opacity Limits for Pneumatic Coal-Cleaning Equipment, Coal Processing and Conveying Equipment, Coal Storage Systems, Transfer and Loading Systems, and Open Storage Piles

The PM and opacity limits in the final rule for pneumatic coal-cleaning equipment are the same as those proposed in the May 2009 supplemental proposal. Pneumatic coal-cleaning equipment, cleaning all coal ranks, constructed, reconstructed, or modified after April 28, 2008, must comply with a PM limit of 0.023 g/dscm (0.010 gr/dscf) and an opacity limit of equal to or less than 5 percent.

For affected coal-handling equipment (coal processing and conveying equipment (including breakers and crushers), coal storage systems, and transfer and loading systems) constructed, reconstructed, or modified after April 28, 2008, that is mechanically vented to the atmosphere, the final rule requires compliance with the PM limit that was proposed in May 2009. That is, mechanically vented coal-handling equipment constructed, reconstructed, or modified after April 28, 2008, must comply with a PM limit of 0.023 g/dscm (0.010 gr/dscf). The final rule also requires affected coal handling equipment constructed, reconstructed, or modified after April 28, 2008, to maintain opacity levels of less than 10 percent. In the May 27, 2009, supplemental proposal, EPA requested comment on whether an opacity limit of less than 10 percent is more appropriate than a limit of 5 percent as proposed in the supplemental action. We also requested comment on whether the 5 percent limit is achievable on a long-term basis and whether the limit provides an adequate compliance margin. As we pointed out in supporting documentation (*see* EPA-HQ-OAR-2008-0260-0083, pp. 3-4), the data used to establish the supplemental proposal's 5 percent opacity level were primarily from initial compliance tests. Upon reconsideration of EPA's data and consideration of public comments and additional supporting data, EPA has determined that an opacity limit of less than 10 percent is more appropriate for all coal handling equipment. An opacity limit of 10 percent will allow for control equipment degradation, adverse conditions, and variability that would not be reflected in initial compliance tests. Although we modified our conclusion regarding the opacity limit achievable by the application of BDT, we did not modify our prior conclusions regarding BDT for coal-handling



equipment. BDT for coal-handling equipment used on subbituminous and lignite coals consists of four technologies—fabric filters, passive enclosure containment systems (PECS), fogging systems, and wet extraction scrubbers. BDT for coal-handling equipment processing bituminous coal is the use of chemical suppressants. All of these emissions reduction measures can control PM emissions equally well. See EPA-HQ-OAR-2008-0260-0083, pp. 1–2.

EPA also concluded that if a building in which affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, and transfer system operations are enclosed is found to be in compliance with the subpart Y limits that apply to the affected facilities enclosed in the building, the affected facilities enclosed in that building also are in compliance. Thus, the final rule provides that buildings containing coal processing and conveying equipment, coal storage systems, and transfer system operations constructed, reconstructed, or modified on or before April 28, 2008, must not exhibit 20 percent opacity or greater. Fugitive emissions from buildings that enclose coal processing and conveying equipment, coal storage systems, and coal transfer system operations constructed, reconstructed, or modified after April 28, 2008, must not exhibit opacity of 10 percent or more. For buildings enclosing coal processing and conveying equipment, coal storage systems, and transfer system operations constructed, reconstructed, or modified after April 28, 2008, that discharge emissions from a mechanical vent, emissions must not contain PM in excess of 0.023 g/dscm (0.010 gr/dscf).

#### 4. Open Storage Pile Requirements

EPA's May 27, 2009, supplemental action proposed to establish work practice standards for open storage piles and roadways. EPA determined that it was not feasible to establish opacity or PM limits for these types of affected facilities. At the current time, EPA believes it is difficult and prohibitively expensive to measure actual PM emissions from individual open storage piles or roadways. Further, the size of open storage piles and the mobile nature of coal dust from vehicle tires on roadways currently make the use of Method 9 opacity observations unreasonable in many situations. Based on that determination, we proposed to require owners or operators of open storage piles and roadways associated with coal preparation plants to develop and comply with a fugitive coal dust

emissions control plan to control fugitive PM emissions. Commenters pointed out that the Surface Mining Control and Reclamation Act (SMCRA) covers fugitive dust emissions from roads at coal preparation and processing plants at mine sites and requires a fugitive dust plan. EPA believes that coal moving operations, once the coal enters the "coal preparation plant," will be by conveyor rather than by truck. Therefore, we believe that the requirements of SMCRA are sufficient to address air emissions from roadways that may be found within a coal preparation and processing plant at mine sites. For coal preparation and processing plants at end-user facilities, we believe that, again, once the coal enters the "coal preparation plant," coal moving operations will be by conveyor rather than by truck. Thus, EPA has decided not to finalize the proposed requirements for roadways. EPA also proposed to require that the fugitive coal dust emissions control plan include procedures for limiting emissions from all types of "coal processing and conveying equipment" at a coal preparation and processing plant. EPA agrees with commenters that subpart Y should specifically designate each type of affected facility subject to the fugitive dust emissions control plan and, therefore, we are not finalizing that proposed requirement.

A fugitive coal dust emissions control plan is required for open storage piles, which include the equipment used in the loading, unloading and conveying operations of the affected facility, constructed, reconstructed or modified after May 27, 2009. The owner or operator is required to prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner/operator will use to minimize fugitive coal dust emissions from each open storage pile. The owner or operator is also required to explain how the measures are applicable and appropriate for the site conditions. For open coal storage piles, the fugitive coal dust emissions plan must require that one or more of the following control measures will be used to minimize to the greatest extent practicable fugitive coal dust: locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when additional provisions discussed below are met), use of a wind barrier, compaction, or

use of a vegetative cover. The owner or operator must select, from the list provided, the control measures that are most appropriate for the site conditions. Where appropriate chemical dust suppression agents are selected by the owner/operator as a control measure to minimize fugitive coal dust emissions, only chemical dust suppressants with Occupational Safety and Health Administration (OSHA)-compliant material safety data sheets (MSDS) are allowed, the MSDS must be included in the fugitive coal dust emissions control plan, and the owner/operator must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants (e.g., water run-off, water quality concerns).

An owner/operator may petition the Administrator requesting approval of a control measure other than those specified above. The petition process established in the final rule is similar to the process used in 40 CFR Part 60, subpart Db, to establish alternative NO<sub>x</sub> limits for certain industrial boilers. The petition must demonstrate to the Administrator that the alternate control measure will provide equivalent overall environmental protection or that it is either economically or technically infeasible for the affected facility to use the control measures specified above. The owner/operator must operate in accordance with the plan including the alternative measures and, while operating in accordance with the plan submitted with the petition, is deemed to be in compliance with the fugitive coal dust emissions control plan requirements while the petition is pending. EPA decided to include this petition process in the final rule in response to comments objecting to provisions proposed in the May 2009 supplemental proposal that would have provided for permitting authority approval of the fugitive coal dust emissions control plans and allowed the permitting authorities to approve the use of alternate technologies if it had been determined that the technology provides equivalent overall environmental protection.

Each owner/operator must submit their fugitive coal dust emissions control plan to the Administrator or delegated authority to provide an opportunity for the Administrator or delegated authority to object to the fugitive coal dust emissions control plan. The fugitive coal dust emissions control plan must be submitted to the Administrator or delegated authority prior to the startup date for the affected facility. If an objection is raised, the

owner/operator has 30 days from receipt of the objection to submit a revised fugitive coal dust emissions control plan. The owner/operator must operate in accordance with the revised fugitive coal dust emissions control plan. The Administrator and delegated authority retain the ability to object to the revised fugitive coal dust emissions control plan.

#### *C. Emissions Testing and Monitoring Requirements*

Based on our review of public comments submitted in response to the May 27, 2009, supplemental proposal and further analysis, minor revisions were made to certain emissions testing and monitoring requirements included in that supplemental proposal. The testing and monitoring requirements of the final rule are described below. All affected facilities subject to emissions limits are required to conduct initial emissions testing to show compliance with the limits included in the final rule. PM emissions must be measured with EPA Method 5, 5B, or 5D of 40 CFR Part 60, appendix A-4, or EPA Method 17 of 40 CFR Part 60, appendix A-7. EPA Method 6, 6A, or 6C of 40 CFR Part 60, appendix A-4, must be used to measure SO<sub>2</sub> emissions. NO<sub>x</sub> and CO emissions must be measured with EPA Method 7 or 7E, and Method 10, respectively, of 40 CFR Part 60, appendix A-4. In addition, CO and NO<sub>x</sub> performance testing must be conducted concurrently, or within a 60-minute period. Initial testing for PM emissions is required for coal-handling equipment exhaust that is mechanically vented and for thermal dryer exhaust. Depending on the type of thermal dryer and its fuel type, initial testing for SO<sub>2</sub>, NO<sub>x</sub>, and CO may also be required. Following initial performance testing, the frequency of subsequent emissions testing is variable. If an affected facility, excluding thermal dryers, has a design controlled potential PM emissions rate, considering controls, of 1.0 Mg (1.1 tons) per year or less, annual performance testing is not required as long as: (1) PM emissions, as determined by the initial performance test, are less than or equal to the applicable PM limit; (2) the manufacturer's recommended maintenance procedures for each control device are followed; and (3) all 6-minute average opacity readings from the most recent Method 9 performance test are equal to or less than half the applicable opacity limit.

In addition, for similar, separate affected facilities using identical control equipment, the Administrator or delegated authority may authorize a

single emissions test as adequate demonstration for up to four other similar, separate affected facilities as long as: (1) The most recent performance test for each affected facility shows that performance of each affected facility is 90 percent or less of the applicable emissions limit; (2) the manufacturer's recommended maintenance procedures for each control device are followed; and (3) each affected facility conducts a performance test for each pollutant for which they are subject to a limit at least once every 5 years. Affected facilities that, based on their most recent performance test, emit at a level that is 50 percent or less of an applicable emissions limit are only required to conduct performance testing every 24 months, as opposed to every 12 months. Finally, an owner/operator of an affected facility that has not operated for the 60 calendar days prior to the due date of a performance test is not required to perform the performance test until 30 calendar days after the next operating day.

The final rule requires the use of bag leak detection systems on subpart Y affected facilities with fabric filters that have a design controlled potential PM emissions rate of 25 Mg (28 tons) or more. This requirement applies to affected facilities constructed, reconstructed, or modified after April 28, 2008. For affected facilities with venturi scrubbers, continuous measurement of the pressure loss through the venturi constriction of the scrubber and of the liquid flow rate to the scrubber is required. If the venturi scrubber is used to control SO<sub>2</sub> emissions, pH of the scrubber liquor also must be continuously measured. For affected facilities using packed bed scrubbers with the addition of lime, the liquid flow rate to the scrubber and the scrubber liquor pH must be continuously measured. The final rule does not require continuous measurement of the temperature of the gas stream at the exit of the thermal dryer for affected facilities constructed, reconstructed, or modified after April 28, 2008. In the supplemental proposal, EPA requested comment on the utility of collecting continuous temperature data and determined that the requirement can be eliminated without risk of a significant increase in emissions.

#### *D. Opacity Testing and Monitoring Requirements*

Numerous comments were submitted to EPA regarding the opacity testing and monitoring requirements included in the May 27, 2009, supplemental

proposal. Commenters objected to the proposed procedures as being unreasonable, burdensome, too complex, and confusing. Based on our review of public comments and further analysis, we modified the proposed requirements where we determined the burden could be reduced without compromising the integrity of the overall testing and monitoring requirements. We also attempted to make the requirements in the final rule less complex than those included in the supplemental proposal. All affected facilities subject to emissions limits are required to conduct initial emissions testing to show compliance with the opacity limits included in the final rule. Opacity must be measured with EPA Method 9 of 40 CFR part 60, appendix A-4. The final rule allows the use of a continuous opacity monitoring system (COMS) as an alternative to all other opacity monitoring requirements. The final rule includes a 60-minute observation period for Method 9 performance testing. The observation period may be decreased from 60 minutes to 30 minutes if, during the initial 30 minutes of the observation of a Method 9 performance test, all the 6-minute averages are less than or equal to half the applicable opacity limit. In the final rule, the frequency of subsequent visible emissions testing is based on the 6-minute average opacity readings from the most recent performance test. Owners/operators of affected facilities where any 6-minute average opacity reading in the most recent Method 9 performance test exceeds half the applicable opacity limit are required to conduct a Method 9 performance test within 90 days of the previous performance test. Owners/operators of affected facilities where all 6-minute average opacity readings in the most recent Method 9 performance test are equal to or less than half the applicable opacity limit are required to conduct a Method 9 performance test within 12 months of the previous performance test. Further, if a Method 9 opacity performance test is conducted concurrently with (or within a 60-minute period of) a Method 5, 5B, or 5D PM performance test for affected sources with wet scrubbers that continuously monitor the specified scrubber parameters, no subsequent Method 9 opacity performance testing is required. The final rule allows simultaneous Method 9 opacity performance testing for up to three emissions points as long as all three emissions points are within a 70-degree viewing sector or angle in front of the observer such that the proper sun position can be maintained

for all three points. If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), the observer must stop taking readings for the other two points and continue reading just that single point.

As an alternative to subsequent Method 9 performance testing, the final rule allows owners/operators of affected facilities to elect to conduct monitoring as follows: (1) Monthly visual observations of process and control equipment must be conducted and, if any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible; and (2) daily walkthrough observations consisting of a single 15-second observation (*i.e.*, visible emissions or no visible emissions) of each affected facility must be conducted and, if any visible emissions are observed, within 24 hours corrective actions must be conducted and the owner/operator must demonstrate that there are no visible emissions. If visible emissions are still observed, a Method 9 performance test must be conducted within 45 operating days to show compliance with the applicable opacity limit. The final rule requires that Method 9 performance testing must be conducted at least once every 5 years for each affected facility complying with this alternative monitoring option. Each observer determining the presence of visible emissions is required to meet the training requirements of Method 22 of appendix A-7 of 40 CFR Part 60. The final rule also allows the use of a digital opacity monitoring system in lieu of subsequent Method 9 performance testing. The Administrator may approve opacity monitoring plans for owners/operators that elect to use the digital opacity monitoring system to detect the presence of visible emissions.

The final rule includes separate opacity testing and monitoring requirements for coal truck dump operations. EPA determined that a different approach for Method 9 opacity performance testing is warranted due to the intermittent nature of coal truck dumping. Coal truck dump operations are subject to the same opacity limits as other coal handling operations. The final rule specifies that compliance with the opacity limit is determined by averaging all Method 9 15-second opacity readings made during the duration of three separate truck dump events. A truck dump event commences when the truck bed begins to elevate and concludes when the truck bed returns to a horizontal position. The final rule requires monthly visual

observations of the truck dump equipment and, if any deficiencies are observed, the necessary maintenance must be conducted as expeditiously as possible. Subsequent Method 9 opacity performance testing using the three truck dump procedure is required to be conducted every 90 days.

#### *E. Recordkeeping and Reporting Requirements*

The final rule requires that a logbook be maintained by each owner/operator of a coal preparation and processing plant that commences construction, reconstruction, or modification after April 28, 2008. The logbook must include records of subpart Y requirements regarding manufacturers' recommended maintenance procedures for process and control equipment, visual observations of coal-handling equipment, the amount and type of coal processed, the amount of chemical stabilizer or water purchased, the operational status of dust suppressant systems, compliance with a fugitive coal dust emissions control plan, BLDS operation, and measurement of monitoring parameters (*e.g.*, scrubber pressure loss, water supply flow rate, pH of scrubber fluid).

#### *F. Electronic Reporting*

The final rule requires owners/operators of affected facilities at coal preparation and processing plants to submit an electronic copy of all performance test reports to an EPA electronic data base (WebFIRE). Data entry requires access to the Internet and is expected to be completed by the stack testing company as part of the work that they are contracted to perform. Submittal to WebFIRE is required as of July 1, 2011. For performance tests not accepted by WebFIRE, owner/operators are required to mail summary results directly to EPA.

#### *G. Additional Amendments*

The final rule confirms the subpart Y title change from *Coal Preparation Plants to Coal Preparation and Processing Plants*. In addition to revising the definitions for coal, pneumatic coal-cleaning equipment, and thermal dryer as described in section III.A of this preamble, the final rule amends the definition for bituminous coal; adds definitions for anthracite, bag leak detection system, coal refuse, design controlled potential emissions rate, indirect thermal dryer, lignite, mechanical vent, operating day, potential combustion concentration, and subbituminous coal; and deletes the definition for cyclonic flow. The definition of coal refuse in the final rule

has been modified to be consistent with the definition of coal refuse in 40 CFR part 60, subpart Da. Also, EPA is not finalizing the April 28, 2008, proposed revision to the definition of coal processing and conveying equipment, but is clarifying that equipment located at the mine face is not considered to be part of the coal preparation plant. In addition, the May 27, 2009, proposed revision to the definition of coal storage system is also not being promulgated. Rather, the final rule adds a definition for open storage pile.

#### **IV. Summary of Significant Comments and Responses**

As explained in Section II of this preamble, EPA proposed amendments to the coal preparation plants NSPS on April 28, 2008, (73 FR 22901) and received a total of 42 comments from coal preparation plants, industry trade associations, control technology vendors, environmental groups, and State environmental agencies. After reviewing those comments and considering additional data, EPA decided to publish a supplemental proposal (*see* 74 FR 25304, May 27, 2009) which revised some of the requirements proposed on April 28, 2008. A total of 44 comments regarding the supplemental proposal were received from coal preparation plants, other types of industrial facilities, industry associations, environmental groups, and State environmental agencies. Responses to comments regarding the April 28, 2008, proposal are not discussed in this preamble. In many instances, the May 27, 2009, supplemental proposal either addressed the comment or made revisions that negated the comment. Significant comments received regarding the May 27, 2009, supplemental proposal and EPA's responses to those comments are discussed below. Detailed responses to the comments not included in this preamble, including responses to the comments regarding the April 28, 2008, proposal, are contained in the Summary of Public Comments and Responses document which is included in the docket for this rulemaking.

##### *A. Regulated Pollutants*

*Comment:* Many commenters stated that EPA's authority to promulgate NSPS requires an endangerment finding for the coal preparation plant source category and the pollutant(s) of interest. Because EPA has not made such a finding for SO<sub>2</sub>, NO<sub>x</sub>, or CO emissions from coal preparation plants, the commenters contend that emissions standards for SO<sub>2</sub>, NO<sub>x</sub>, or CO

applicable to coal preparation plants under subpart Y cannot be set.

*Response:* CAA section 111(b)(1)(A) requires the Administrator to publish a list of categories of stationary sources and include a category of sources on that list if he finds that “in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. 7411(b)(1)(A) (CAA section 111(b)(1)(A)). The plain language of section 111(b)(1)(A) provides that such findings are to be made for source categories, not for specific pollutants emitted by the source category. Therefore, once the Administrator determines that the source category causes or contributes significantly to air pollution which may endanger public health or welfare, the Administrator must add the source category to the section 111(b)(1)(A) list and subsequently establish standards of performance for the sources in that source category. Determinations regarding the specific pollutants to be regulated are made, not in the initial endangerment finding, but at the time the performance standards are promulgated. In addition, CAA section 111(b)(1)(B) requires EPA to review and revise, if appropriate, the standards at least every eight years. In conducting that review, EPA has discretion to revisit its original determination regarding which pollutants emitted from the source category should be regulated. Neither the text of the CAA nor subsequent statements of EPA provide any support for the argument that an endangerment finding must be made for specific pollutants or for the argument that the scope of the revised NSPS must be limited to the pollutants (or affected facilities) regulated in the initial NSPS.

The text of section 111(b)(1)(A) provides no support for the argument that section 111 endangerment findings must be made for each pollutant emitted by the source category before that pollutant can be regulated in the NSPS. In contrast, the statutory text calls for a list of “categories of stationary sources.” It does not require, at the time of listing, an identification of all the specific pollutants emitted by the source category that may endanger public health or welfare. Instead, it requires only a general determination that emissions from the category cause or contribute to air pollution that may endanger public health or welfare. The endangerment finding is used to identify categories of sources for regulation, not to dictate the substantive content of the required standards of performance. The endangerment finding neither requires regulation of each

pollutant emitted by the source category, nor limits EPA’s discretion to determine (in the initial regulation or in subsequent revisions) which pollutants should be regulated.

Instead, section 111(b)(1)(B) requires the Administrator, after publishing proposed regulations and providing an opportunity for comment, to promulgate such standards as the Administrator “deems appropriate.” The statutory scheme thus provides EPA with significant discretion to determine which pollutant(s) should be regulated under the NSPS. The Agency has long interpreted section 111(b)(1)(B) as providing the Administrator with this flexibility. *See National Lime Assoc. v. EPA*, 627 F.2d 416, 426 n.27 (DC Cir. 1980) (explaining reasons for not promulgating standards for NO<sub>x</sub>, SO<sub>2</sub> and CO from lime plants); *see also National Assoc. of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1228–1230 (DC Cir. 2007) (finding that the “deems appropriate” language in CAA section 231 provides a “delegation of authority” that is “both explicit and extraordinarily broad”).

EPA has, in prior NSPS rulemakings, exercised its discretion to identify pollutants for regulation. It has sometimes exercised this discretion to defer regulation of specific pollutants to a later date. *See, e.g.,* 52 FR 36678, 36682 (September 30, 1987) (noting in subpart DDD proposal that “standards development for this industry is focusing initially on limiting emissions of VOC”); 49 FR 2656, 2659 (Jan 20, 1984) (explaining why SO<sub>2</sub> and VOC were the only pollutants in the natural gas production industry selected for regulation under subpart LLL “at this time.”); 48 FR 37338, 37340–42 (Aug. 17, 1983) (declining to regulate in subpart AAa, emissions of pollutants for which adequately demonstrated control technology was not currently available). EPA has also exercised this discretion to promulgate, during 8-year review rulemakings, new performance standards for pollutants not previously covered by the NSPS in question. *See, e.g.,* 52 FR 24624, 24710 (July 1, 1987) (considering PM<sub>10</sub> controls in future rulemakings); 71 FR 9866 (Feb. 27, 2006) (establishing new PM standards for boilers); 73 FR 35838 (June 24, 2008) (adding NO<sub>x</sub> limits for fluid catalytic cracking units, NO<sub>x</sub> limits for fluid coking units and NO<sub>x</sub> limits for process heaters to the refineries NSPS). In addition, EPA has previously noted its disagreement with comments implying that an additional endangerment finding would be required to support regulation of a pollutant not previously regulated

in that specific NSPS. *See, e.g.,* 73 FR 35838, 35859 n2 (June 24, 2008).

Further, the argument that EPA must issue a separate endangerment finding before regulating a pollutant not previously regulated in the NSPS for a source category is illogical. Once EPA has determined that a source category causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare emissions from a source category, the recognition that the source has emissions above and beyond those discussed in the original endangerment finding could only serve to strengthen the basis for the endangerment finding for the source category. Further, the listing of the source category is only the first step in the process. Once the finding is made, the statute allows the more detailed analysis of which pollutants are actually emitted and should be regulated to be conducted in the rulemaking process used promulgate and revise the standards for the source category.

Finally, it is worth noting that EPA previously addressed this topic in the context of the subpart Y NSPS for coal preparation and processing plants. Coal preparation plants were listed under section 111(b)(1)(A) on October 24, 1974, pursuant to the Administrator’s determination that such plants “may contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare.” 39 FR 37,807 (Oct. 24, 1974). The Background Information Document for the subpart Y standards proposed at that time explains the process to be used for setting NSPS and explicitly notes that “[a]lthough a source category may be selected to be covered by a standard of performance, treatment of some of the pollutants of facilities within that source category may be deferred.” Background Information for Standards of Performance: Coal Preparation Plants Volume 1: Proposed Standards at ix.

For these reasons, EPA disagrees with the comment suggesting that EPA cannot set SO<sub>2</sub>, NO<sub>x</sub>, or CO emissions standards applicable to coal preparation plants under subpart Y.

*Comment:* One commenter stated that EPA should recognize its obligation to promulgate NSPS for emissions of carbon dioxide (CO<sub>2</sub>), nitric oxide (N<sub>2</sub>O), and black carbon (a component of PM) from coal preparation and processing plants. The commenter asserts that because these pollutants are the result of incomplete fuel combustion, they are emitted at coal prep plants, particularly by thermal dryers heated by coal or other fossil fuels. Emissions of each pollutant, the

commenter asserts, carries individual and distinct risks and is controlled by different technologies so EPA must fully analyze each pollutant and set separate NSPS for each.

*Response:* At this time EPA is not aware of any emissions or mitigation data for the pollutants noted by the commenter for this source category. Hence, we lack sufficient information on which to base an NSPS for emissions of CO<sub>2</sub>, N<sub>2</sub>O, and black carbon from the source category at this time. Rough estimates of CO<sub>2</sub> from this source category suggest that this source category would be among the smaller CO<sub>2</sub>-emitting NSPS categories. At this time, we are not making any final determination regarding whether it would be appropriate to set such standards.

In addition, to the extent the comment suggests that EPA should utilize its authority under other provisions of the CAA to require sources to gather and report GHG emissions and to the extent it raises issues not opened for public comment in the supplemental proposal, it is beyond the scope of this rulemaking.

*Comment:* One commenter asserts that CAA section 111 carries a mandate for EPA to set NSPS for the pollutants emitted by a source. The commenter cites to language in section 111(a)(3) that defines a stationary source as any building, structure, facility or installation which emits or may emit any air pollution and language in section 111(b)(4) defining a modification as a physical or operational change which increases the amount of any air pollution emitted by the source. In addition, the commenter cites to the Supreme Court's decision in *Massachusetts v. EPA*, 549 U.S. 497, 529 (2007) and EPA's April 2009 Proposed Findings for Greenhouse Gases (74 FR 18886 (Apr. 24, 2009)).

*Response:* The Agency has long exercised its discretion to regulate only a subset of the pollutants emitted by a source category or to defer regulation of certain pollutants to a later date. See *e.g.*, *National Lime Assoc. v. EPA*, 627 F.2d 416, 426 n.27 (DC Cir. 1980) (explaining reasons for not promulgating standards for NO<sub>x</sub>, SO<sub>2</sub>, and CO from lime plants); *National Assoc. of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1228–1230 (DC Cir. 2007) (finding that the “deems appropriate” language in CAA section 231 provides a “delegation of authority” that is “both explicit and extraordinarily broad”); 52 FR 36678, 36682 (September 30, 1987) (explaining Subpart DDD standards' initial focus on limiting

emissions of VOC); 49 FR 2656, 2659 (January 20, 1984) (explaining Subpart LLL regulates only emissions of SO<sub>2</sub> and VOC); 48 FR 37338, 37340–42 (August 17, 1983) (explaining why Subpart AAa does not regulate emissions of pollutants for which adequately demonstrated control technology was not currently available).

#### B. Applicability and Definitions

*Comment:* Many commenters stated that EPA proposed to add “processing” to the title of subpart Y and, although EPA indicated in the preamble to the May 27, 2009, supplemental proposal, that it did not intend to change the applicability of subpart Y, the commenters are concerned that EPA has not adequately justified the need to make the change. Subpart Y already defines “processing equipment” as “machinery used to reduce the size of coal or to separate coal from refuse.” Despite EPA's stated intentions, commenters believe that the risk exists that EPA, in future applicability interpretations, will determine that additional, non-preparation operations meet the meaning of processing, and will thereby bring them under subpart Y purview. To avoid confusion, the commenters stated that EPA should remove “processing” from the title.

*Response:* In the preamble to the supplemental proposal, EPA indicated that the proposed title change was for clarification purposes (*i.e.*, to more accurately reflect the affected facilities subject to subpart Y). The affected facilities covered by subpart Y since its 1976 promulgation include both preparation and processing units. We do not intend the title change to have any impact on the extent of EPA's authority to regulate specific affected facilities now or in the future. The final action promulgates the proposed title change “Standards of Performance for Coal Preparation and Processing Plants.”

*Comment:* Many commenters acknowledged that in its May 27, 2009, supplemental action, EPA proposed to amend the definition of “coal” to include “coal refuse” and “petroleum coke.” These commenters objected to EPA's proposed inclusion of “coal refuse” because its inclusion further expands the subpart Y applicability with no data specific to “coal refuse” on what constitutes adequately demonstrated technologies and their respective levels of achievable emissions. Specifically, one commenter is concerned that subpart Y's definition of “coal refuse” could create the potential for the unintended application of such definition to the overburden from surface mines or to mine-

development waste associated with underground mining. The commenter stated that the final rule must make clear that the definition of “coal refuse” does not apply to these types of operations and suggested using the SMCRA definition instead (Coal refuse is defined as “any waste coal, rock, shale, slurry, culm, gob, boney, slate, clay and related materials, associated with or near a coal seam, which are either brought aboveground or otherwise removed from a coal mine in the process of mining coal or which are separated from coal during the cleaning or preparation operations. The term includes underground development wastes, coal processing wastes, excess spoil, but does not mean overburden from surface mining activities”). In contrast, several other commenters stated either that they support, or that they have no objections to, including “coal refuse” in the definition of “coal” for subpart Y.

*Response:* EPA is including “coal refuse” in the final rule's definition of “coal” for the purposes of subpart Y because it is handled in the same machinery as other types of coal at coal preparation and processing plants. “Coal refuse” is separately defined, as well as included in the definition of “coal” in other NSPS (*e.g.*, 40 CFR part 60 subparts Da and Db), and its inclusion here provides consistency with other EPA regulations. EPA has modified the definition of “coal refuse” in subpart Y to be consistent with the definition in 40 CFR subpart Da. Given the historical inclusion of “coal refuse” in these other NSPS and the fact that the constituents and emission characteristics of “coal” and “coal refuse” are believed to be the same, EPA has concluded that inclusion of “coal refuse” in subpart Y is appropriate.

*Comment:* Many commenters objected to EPA extending the applicability of subpart Y to facilities producing petroleum coke by adding “petroleum coke” to the subpart Y definition of “coal”. They noted that the emission standards in the May 27, 2009, supplemental proposal appear to have been developed primarily for coal processing plants, and do not seem to reflect the differences between coal and petroleum coke, or contemplate the emissions associated with petroleum coke handling operations. Without more information on these emissions, the commenters contend that it is inappropriate for EPA to broaden the definition of “coal” to include “petroleum coke” in this final rulemaking at this time. However, if “petroleum coke” is included, several commenters recommended petroleum

coke operations that should be specifically exempted from being subject to subpart Y. Reasons cited by commenters include: (1) "Petroleum coke" is a petroleum product that should not be subject to a rule (*i.e.*, NSPS subpart Y) intended to pertain to standards of performance for coal preparation and processing plants; (2) petroleum refining operations that include petroleum coke production are subject to numerous NSPS rules to ensure protection of public health and the environment, to two separate maximum achievable control technology (MACT) rules specific to air emissions from process units, including petroleum coke production, and to the NSR permitting process to ensure compliance with National Ambient Air Quality Standards (NAAQS) for PM; (3) EPA did not provide adequate notice that petroleum coke manufacturing equipment (*e.g.*, refinery coker units) was being considered for new standards; (4) EPA neither gathered or requested data to determine if petroleum coke manufacturing equipment should be included in the affected sources subject to subpart Y; and (5) standards for coal processing and conveying equipment, coal storage systems, and transfer and loading system operations are not suitable for petroleum coke.

Two commenters suggested that EPA change the approach to include end-user petroleum coke processing in the existing NSPS for Coal Preparation and Processing Plants by retaining the existing definition of "coal" and adding "petroleum coke" as a separate material with associated provisions. If EPA expands the source category by including facilities that handle only "petroleum coke" (and not "coal"), the commenters believe it should do so only for end-users of "petroleum coke" used as fuel. Numerous commenters presented arguments that petroleum coke calciners are not same as coal thermal dryers and, therefore, believe it is inappropriate to apply the subpart Y thermal dryer standards to coke calciners. The commenters explained that the purpose and function of a petroleum coke calciner is to fundamentally change the material by rearranging carbon molecules and, thus, it acts as a reactor, not a "dryer". In addition, commenters noted that calciners in the petroleum industry operate at much higher temperatures than typical coal dryers, intuitively would have different emission profiles, and use different methods than coal thermal dryers to control PM emissions.

*Response:* Based on a review of the comments received and because of the limited amount of currently available

data, EPA has decided not to include "petroleum coke" in the subpart Y definition of "coal" at this time. EPA plans on obtaining additional data on petroleum coking activities at petroleum refineries through current actions on the refinery NSPS review (40 CFR part 60 subpart J). In addition, additional data will also be obtained on petroleum coke activities at end-user locations (*e.g.*, coal-fired power plants).

*Comment:* Several commenters supported EPA's proposal to distinguish between indirect and direct contact thermal dryers. The commenters anticipate that more electric utilities will use indirect contact thermal dryers in the future. Commenters agreed with EPA's decision to exclude indirect thermal dryers from the coal dryer SO<sub>2</sub> and NO<sub>x</sub>/CO standards "[i]f the source of heat (the source of combustion or furnace) is subject to a boiler NSPS (subpart Da, Db, or Dc). However, one commenter stated that in the case of one facility, the waste heat being used for the facility's coal dryer does not come from the exhaust gases of a boiler, but rather from the condensing water from steam turbines. In that case, there is no affected source to which the combustion pollutant emission limits can apply. Thus, the commenter agreed that the thermal dryer would only be subject to the PM limit, but not because it is subject to another NSPS. The commenter further stated their belief that subpart Y coal dryer emission limits should not apply to the source of heat for an indirect thermal dryer.

*Response:* It is EPA's intent to regulate, at this time, emissions from thermal dryers only in circumstances where coal, coal refuse, or residual oil are used to provide thermal input. Thermal dryers that use residual or waste heat from the combustion of these fuels are only subject to the PM and opacity standards. As pointed out by the commenters, indirect thermal dryers for which the source of heat is subject to a boiler NSPS are not subject to the emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO because those pollutants would not be present in the thermal dryer exhaust. In addition, EPA has concluded that affected thermal dryers for which all of the thermal input is supplied by gaseous fuels (*e.g.*, blast furnace gas, coke oven gas, natural gas) or distillate oil also should not be subject to the emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO. Those pollutants are relatively small from these types of thermal dryers and the testing requirements will not result in any emissions reductions. As is the case with the facility described by the commenter, if there is no combustion process providing the heat for the dryer,

then there is no practicality in having emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO.

*Comment:* Several commenters stated that emissions from thermal dryers integrated with in-line coal mills at cement manufacturing plants should not be subject to subpart Y and instead be subject to the standard for the affected facility as part of the cement manufacturing process. According to the commenters, the unique coal processing and handling systems found at Portland cement plants are best addressed by the Portland Cement NSPS (40 CFR part 60, subpart F) and NESHAP (40 CFR part 63, subpart LLL). The commenters requested that the subpart Y definition of "thermal dryer" be revised to read "Thermal dryer does not include drying of coal that occurs intentionally or incidentally in the manufacture of Portland cement through direct or indirect contact with hot gases generated by cement manufacturing process units, such as cement kilns, preheaters, precalciners, or clinker coolers." Commenters explained that this approach would (a) clearly distinguish between separately fired, stand-alone thermal dryers that are located at a cement plant, versus thermal dryers or coal mills that are integrated into a cement manufacturing line, and (b) avoid any potential confusion about incidental drying of coal that occurs in the cement-making process. Reasons presented by commenters to support the requested exemption are summarized below.

- In a 1995 determination, EPA stated that when "gases originate in one affected facility and pass through another affected facility as part of the manufacturing process, EPA applies the standard for the affected facility from which the gases are discharged directly into the atmosphere." [Applicability Determination 9600082 "Alternative Monitoring and Opacity Limit Clarification for San Juan Cement Company," John B. Rasnic (May 12, 1995)]. However, a year later EPA qualified this guidance when it concluded that an in-line raw mill was subject to the 40 CFR part 60, subpart F, kiln standards, stating "This determination clarifies that for dry process Portland cement plants with an "in-line" kiln/raw mill configuration, the raw mill does not exist as a separate affected facility and; hence, the appropriate emission limit is that which applies to the kiln." [Applicability Determination 9600083; "Opacity Limitation for 'In-line' Portland Cement Plants," John B. Rasnic (September 7, 1996)].

- Just as emissions from the in-line raw mill in Applicability Determination

9600083 were subject to 40 CFR Part 60, subpart F, NSPS, PM mass and opacity limitations for cement kilns, so should emissions from an in-line coal mill at a cement plant where kiln gases are used to heat and dry the coal be treated as an extension of the kiln and subject to subpart F NSPS and 40 CFR Part 63, subpart LLL, NESHAP cement kiln PM and opacity limits. This approach is consistent with multiple different applicability determinations stating that kiln exhaust gases are subject to the Portland cement NESHAP (40 CFR part 63, subpart LLL) regardless of whether they are routed through the coal mill prior to discharge to the atmosphere. It is also consistent with the data that EPA has reviewed in establishing the proposed subpart Y limits. In the absence of data related to emissions from in-line coal mills, EPA would not have a rational basis supported by evidence in the record for establishing limits that apply to these unique gas streams.

- As Portland cement plants have striven to increase energy efficiency, a common plant configuration has been to employ kiln exhaust gas or heated gas from the plant's clinker cooler to thermally dry coal before it is combusted. Cement kiln exhaust gas is extremely hot, and one of the primary means of improving energy efficiency has been to route this gas back through the process to extract as much heat as reasonably possible. Likewise, the product leaving the kiln (referred to as clinker) will enter a cooling area where gases are blown through the clinker to accelerate the cooling process. In some plants this heated gas is then used to heat the coal entering the combustion process. Both kilns and clinker coolers are affected facilities under 40 CFR part 60, subpart F, NSPS. The use of waste heat from the kiln or the clinker cooler is highly energy efficient, driving down the combustion emissions, including GHG emissions, from the plant as a whole.

- Some cement plants have stand-alone thermal dryers for coal, where the heat for drying is provided by a dedicated combustion source (e.g., coal or natural gas). Those thermal dryers generally should have similar emissions, and similar possibilities for emissions control, as comparable-size thermal coal dryers at other facilities. But where coal drying is integrated into the cement-making process, through direct or indirect exposure of the coal to heat in exhaust gases from units such as cement kilns, preheater/precalciners, or clinker coolers, the emissions from that coal drying, and the potential for controlling those emissions, is very

different from a stand-alone thermal dryer.

- To the extent that subpart Y may apply to coal drying that occurs using waste heat from the manufacture of Portland cement, EPA's assessments of control technology and derivation of emission standards under subpart Y have not taken into account cement-process-related loadings of SO<sub>2</sub>, NO<sub>x</sub>, and CO. EPA has not shown, for example, that it would be feasible for a cement plant to demonstrate compliance with SO<sub>2</sub> mass limits or percent reduction requirements where exhaust gases from coal drying are combined with cement kiln gases, which include SO<sub>2</sub> from fuel consumption and from raw materials. Similarly, NO<sub>x</sub> limits that may be achievable through combustion controls on a standalone thermal dryer may not be achievable in exhaust gases mixed with cement kiln gases containing both fuel NO<sub>x</sub> and thermal NO<sub>x</sub> from the cement-making process.

- The supplemental proposal would not impose SO<sub>2</sub>, NO<sub>x</sub>, and CO limits on indirect thermal dryers where the source of the heat is subject to NSPS under 40 CFR Part 60, subpart Da, Db, or Dc. Although EPA has not really explained the basis for that exclusion, it is inferred that EPA believes the BDT determinations associated with the NSPS for the source of heat are more appropriate and should be applied. The same rationale should be applied to thermal drying that is incidental to cement manufacturing, and EPA should exclude exhaust gases that are subject to the 40 CFR part 60, subpart F, NSPS from being subject to the subpart Y SO<sub>2</sub>, NO<sub>x</sub>, and CO limits.

*Response:* EPA agrees that in the case of a coal dryer at a cement manufacturing facility where all of the thermal input is supplied by cement kiln exhaust or clinker cooler exhaust, the dryer should be regulated under the appropriate Portland Cement kiln regulations (40 CFR part 60, subpart F, and 40 CFR part 63, subpart LLL). This would also imply that any emissions from the thermal dryer are considered as part of the kiln or clinker cooler emissions. The final rule's emissions limits apply to new, reconstructed, or modified thermal dryers at Portland cement manufacturing plants in situations where the thermal input is not supplied by cement kiln or clinker cooler exhaust. Other subpart Y affected facilities located at Portland cement manufacturing plants (e.g., storage systems, conveyors) also are subject to subpart Y.

*Comment:* One commenter requested that thermal dryers fired with process

gases at integrated iron and steel plants be exempted from the subpart Y emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO. Reasons presented by commenter to support the requested exemption are summarized below.

- The pulverized coal injection systems at some integrated iron and steel plants also burn process gases (i.e., blast furnace gas or coke oven gas) as the primary fuel in thermal dryers. These process gases are valuable substitutes for other sources of purchased energy and are produced on-site. However, they have lower heating values than natural gas and must be consumed on-site to be utilized most effectively, or be flared. As is the case for waste heat, the use of these gases improves overall plant energy efficiency and reduces GHG emissions and should not be discouraged by applying unachievable emission limits when used for thermal drying of coal.

- The use of these process gases for coal drying will not generate any more emissions than if the gases are combusted elsewhere or flared. Instead, if the process gases burned for coal drying were replaced entirely by burning natural gas, emissions (mainly NO<sub>x</sub> and CO) from the integrated iron and steel plant would actually increase. Establishing emission limits for thermal dryers using these process gas fuels will only serve to discourage their use.

- The proposed subpart Y standards are based on the assumption that thermal dryers located at traditional mine sites and coal preparation plants are typically fired with coal, but in the examples noted above, other fuels are normally used. At the very least, the final rule should include a provision to allow operators of thermal dryers fired by natural gas, waste heat, or process gases to apply for a variance upon demonstration that emissions of SO<sub>2</sub>, NO<sub>x</sub>, CO and/or PM are well below the prescribed standards. Upon such a demonstration, monitoring requirements for these pollutants should be reduced or eliminated.

*Response:* As previously noted, EPA has maintained that coal preparation and processing plants may be found at industrial sites such as those described by the commenter. In the Response to Comments document for the October 24, 1974, proposal, EPA stated "[t]he specific coal processing operations regulated by these standards are affected regardless of whether they are located in coal liquefaction plants, power plants, coke ovens, etc." (see "Background Information for Standards of Performance: Coal Preparation Plants; Volume 3: Supplemental Information. January 1976. p. 22). Thus, EPA has not



changed its interpretation. In addition, EPA has made no assumptions as to the source of the heat used in the thermal dryer as the commenter suggests. However, as noted above for Portland cement plants, EPA agrees that in the case of an affected source at an integrated iron and steel manufacturing facility, where the emissions from the thermal dryer would be considered as part of the blast furnace or coke oven emissions, the facility should be regulated under the appropriate steel mill or coke oven NSPS. As previously explained, EPA's intent at this time is to regulate emissions from a thermal dryer only in circumstances where coal, coal refuse, or residual oil are used as thermal input. Thermal dryers that use residual or waste heat from the combustion of these fuels would only be subject to the PM and opacity standards. Indirect thermal dryers for which the source of heat is subject to SO<sub>2</sub>, NO<sub>x</sub>, and/or CO limits under another 40 CFR part 60 subpart would not be subject to the emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO. In addition, affected thermal dryers for which all of the thermal input is supplied by gaseous fuels (e.g., blast furnace gas, coke oven gas, natural gas) or distillate oil also would not be subject to the emission limits for SO<sub>2</sub> and NO<sub>x</sub>/CO.

### C. Subcategorization

*Comment:* Numerous commenters stated that when establishing standards of performance for new stationary sources under the CAA, section 111(b)(2) authorizes the Administrator to "distinguish among classes, types and sizes within categories of new sources." The commenters requested that the final amendments to subpart Y include a distinction between the regulatory requirements for coal preparation plants associated with coal mines (i.e., the "producers") and for coal preparation plants at coal-fired power plants and large industrial sources such as cement manufacturing and coke ovens (i.e., the "users"). The commenters cited the following regulatory requirement and facility characteristics distinctions between coal producers and coal users to support their request.

- Most new coal-fired power plants as well as large industrial coal-fired sources (i.e., the "users") in the future will be major sources of PM emissions and, therefore, be required to use state-of-the-art control technologies (i.e., best available control technology (BACT)). In contrast, surface coal mines with coal preparation facilities as well as stand-alone coal preparation facilities associated with coal mines (i.e., the "producers") are typically minor

sources and will not be subject to BACT under the Prevention of Significant Deterioration (PSD) program but rather to control technology requirements of Minor New Source Review (NSR) programs of individual States. Thus, adoption of industry sectors-based subcategorized emission standards for subpart Y should be considered so that a BACT level of control is not mandated as NSPS for "producers."

- Resource requirements to maintain and demonstrate compliance with the subpart Y emission standards is a function of the number of affected facilities at a particular coal preparation plant. Coal preparation plants of "producers" tend to have more sizing, cleaning and overall "handling" operations than the typical preparation plant at a coal-fired "user." Consequently, as a general rule, the total number of affected facilities at a "producer's" coal preparation plant will be greater than the number of such facilities at the preparation plant of a "user." Moreover, a single affected facility associated with coal mining can frequently have multiple points of fugitive emissions. With more affected facilities per source and more emission points per affected facility, preparation plants associated with coal mining generally will have much greater monitoring/recordkeeping/reporting requirements than will its preparation counterparts at coal-fired "user" sources.

- Fugitive dust from surface coal mines is already regulated by U.S. Department of the Interior regulations in 30 CFR Parts 700–899 under authority of SMCRA, and the existing air pollution control requirements imposed on coal mines by SMCRA must be accounted for. Commenters believe that an EPA examination of SMCRA's dust control requirements in the context of possible NSPS regulation of preparation facilities at coal mines would result in a conclusion that concurrent regulation with similar CAA requirements is not appropriate.

*Response:* The subpart Y NSPS covers coal preparation and processing plants that may be found, as the commenter notes, both at mine sites ("producers") and at industrial sites ("users"). In the Response to Comments document for the October 24, 1974, proposal, EPA stated "[t]he specific coal processing operations regulated by these standards are affected regardless of whether they are located in coal liquefaction plants, power plants, coke ovens, etc." (See "Background Information for Standards of Performance: Coal Preparation Plants; Volume 3: Supplemental Information," January 1976, p. 22.)

Commenters' request that EPA create a separate category for coal preparation and processing facilities at "producers" appears to be based on the assertion that these facilities should not be required to install and operate emissions control technologies that are currently in use or will be used at coal preparation and processing facilities at "users." A primary objective of CAA section 111, however, is to require new sources to be built using the best system of emissions reduction that has been adequately demonstrated. Under CAA section 111, EPA is required to set standards of performance (i.e., standards that reflect the degree of emission limitation achievable through the application of the best system of emission reduction). As the Court has noted, "Section 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present, since it is addressed to standards for new plants." *Portland Cement*, 486 F.2d at 391. In developing NSPS standards, EPA must identify all technologies in use or being developed for use to determine that the Administrator determinations have been adequately demonstrated. This analysis must take into account the cost of achieving the reductions and any nonair quality health and environmental impacts and energy requirements. This analysis is separate and distinct from any BACT analysis that may be done for an individual plant. Finally, EPA disagrees with the comment to the extent it suggests that EPA should not consider technologies determined to be BACT for an individual plant in its BDT analyses. Control technologies change and can improve over time and EPA does not believe that it would be appropriate for EPA to ignore these developments when evaluating what currently constitutes BDT for this source category.

The commenters point out that preparation plants associated with coal mining generally have more affected facilities per source and more emission points per affected facility. Commenters have not suggested, however, and EPA has no reason to believe, that the types of emissions from coal preparation and processing sources associated with coal mines differ from the types of emissions from those same source types at "user" facilities. They further have not demonstrated, and EPA has no reason to believe, that emission control technologies that are adequately demonstrated for facilities at "user" facilities would not be adequately demonstrated for use at facilities located at mines. Thus, EPA continues to believe it is appropriate to regulate these



sources in the same manner and sees no need to establish subcategories at this point. Further, the comment could be read to suggest that a separate subcategory should be created for facilities at mines because these facilities are subject to differences in the degree of control required by other regulations or because these facilities are currently achieving different levels of control or using different emission control technologies. EPA does not believe it would be appropriate to create a separate subcategory on these bases. Further, these factors do not affect what technologies could be found to be “adequately demonstrated” or the emission reductions available from those technologies.

In addition, the regulation of fugitive dust from surface coal mines under SMCRA by the Department of Interior does not, as commenters suggest, result in a “conclusion that concurrent regulation with similar CAA requirements would not be appropriate.”

The October 1974 Background Information Document stated that “Coal preparation” is a segment of the coal industry that encompasses operations between the mining of raw coal and the distribution of product coal. (See “Background Information for Standards of Performance: Coal Preparation Plants; Volume 1: Proposed Standards. October 1974. p. 1.) The support document for the April 1981 NSPS review states that “[t]he first step in the coal preparation process is the delivery of ROM [run of mine] coal to the plant site.” (See “A Review of Standards of Performance for new Stationary Sources—Coal Preparation Plants. December 1980. p. 2–3.)

EPA’s Office of Water has included the following definitions in their regulations for the coal mining industry (at 40 CFR 434.11).

(b) The term “active mining area” means the area, on and beneath land, used or disturbed in activity related to the extraction, removal, or recovery of coal from its natural deposits. This term excludes coal preparation plants, coal preparation plant associated areas and post-mining areas.

(e) The term “coal preparation plant” means a facility where coal is subjected to cleaning, concentrating, or other processing or preparation in order to separate coal from its impurities and then is loaded for transit to a consuming facility.

Thus, EPA, in both the air and water offices, has maintained a distinction between the “active mining area” and the “coal preparation plant.” The

process of “coal preparation” generally involves, among other things, separation of coal from impurities (*i.e.*, “breaking” or “crushing”). As discussed in the response to comment 3.4.1.1.1 in the Response to Comments Document, EPA interprets the “beginning” of the “coal preparation plant” to be the first hopper (*i.e.*, “drop point”) for receipt of coal from any form of transportation.

#### D. Coal Drying Standards

*Comment:* Two commenters supported EPA’s decisions not to set separate limits for fine PM (FPM) (*i.e.*, PM<sub>2.5</sub> or PM<sub>10</sub>) or condensable PM (CPM). In contrast, another commenter rejected EPA’s rationale presented in the May 27, 2009, supplemental proposal that EPA cannot set limits applicable to PM<sub>10</sub>, PM<sub>2.5</sub>, and CPM emissions because EPA has insufficient data and lacks a consistent measurement methodology to collect the needed data. The commenter stated that EPA’s failure to gather such data does not excuse EPA from a statutory obligation, that FPM and CPM emissions standards can be set pending resolution of any measurement issues by a future date certain, and, should EPA conclude that an inability to accurately measure emissions of FPM and CPM from dryers renders the implementation of FPM or CPM standards of performance infeasible, EPA must impose a design, equipment, work practice, or operational standard, or combination thereof.

*Response:* EPA stands by the rationale presented in the May 27, 2009, subpart Y supplemental proposal notice. That is, the available PM emissions data for thermal dryers collected by EPA were measured using EPA Method 5 (*see* 40 CFR 60, appendix A–3). For this method, solid FPM is collected isokinetically on a filter media (typically glass or quartz fiber) and is then measured gravimetrically to determine FPM emissions. Method 5, when performed correctly, provides an accurate measurement of total FPM (for PM > 0.3 μ), but does not measure FPM emissions by particle size distribution (*i.e.*, PM<sub>10</sub> or PM<sub>2.5</sub>), nor does the method measure CPM. EPA is revising existing test methods, EPA Method 201A—Determination of PM<sub>10</sub> Emissions (Constant Sampling Rate Procedure) and EPA Method 202—Determination of Condensable Particulate Emissions from Stationary Sources, to provide test methods that will accurately measure PM<sub>10</sub>, PM<sub>2.5</sub>, and CPM from stationary sources such as coal thermal dryers. Amendments to these test methods were proposed on March 26, 2009 (*see* 74 FR 12970). The amendments to Method 201A add a

particle-sizing device to allow for sampling of PM<sub>2.5</sub>, PM<sub>10</sub>, or both PM<sub>10</sub> and PM<sub>2.5</sub>. The amendments to Method 202 revise the sample collection and recovery procedures of the method to provide for more accurate and precise measurement of CPM. Methods 201A and 202 are not yet finalized and sufficient test data using these methods has not yet been collected for coal-fired thermal dryers. For these reasons, EPA is not currently able to determine whether or not it would be appropriate to add separate PM emission limits to subpart Y for PM<sub>2.5</sub>, PM<sub>10</sub>, or CPM emissions from coal-fired thermal dryers and would not currently be able to establish national standards to address PM<sub>2.5</sub>, PM<sub>10</sub>, or CPM emissions.

*Comment:* One commenter disagreed with EPA’s rationale for not setting coal dryer VOC standards. Specifically, the commenter disagrees with (1) EPA’s decision to not set standards for VOC and CO that reflect use of a gas recirculation thermal dryers, although EPA asserts that VOC and CO emissions would be minimized because new thermal dryers are likely to use a gas recirculation design; (2) EPA’s assertion that not setting a standard for VOC is reasonable because by setting an emissions limit that contains a CO emissions rate, the VOC emissions that result from incomplete combustion also are minimized; and (3) EPA’s assertions that VOC standards cannot be established because a method of control beyond combustion controls has not been identified and the variability of VOC emissions from the coal bed preclude determination of a standard that would be achievable nationwide.

*Response:* EPA has discretion to determine which pollutants are appropriate for regulation in a particular NSPS. In this case, for the reasons noted, EPA concluded that it was not appropriate or feasible to establish a standard of performance for VOC emissions from coal preparation and processing plants at this time. This conclusion does not prohibit EPA from establishing such a standard in a future rulemaking. EPA disagrees with the commenter’s suggestion that a standard could be based on oxidation of VOC in a recirculation thermal dryer. As noted elsewhere, EPA has concluded that there is no one thermal dryer design that will work in all situations found within the industries utilizing coal preparation and processing plants. Control of VOC emissions through activated carbon absorption or regenerative thermal oxidizers are not utilized on thermal dryers at coal preparation and processing plants; further, EPA did not have other information showing that

these technologies are adequately demonstrated for use on coal preparation and processing plant sources. VOC emissions vary, in part, due to the variability in volatile contents of the coals being processed; absent demonstrated control technology, this variability can not be addressed through add-on technology as it is with variable sulfur contents of coal. Thus, EPA believes its decision not to establish VOC emission limits under subpart Y at this time is appropriate.

*Comment:* One commenter stated that the proposed standards for coal drying failed to meet the basic legislative requirements of CAA section 111. The commenter presented the following reasons to support the position that for EPA to comply with CAA section 111, EPA must set standards based on the best demonstrated technologies for drying coal not for the thermal drying of coal through the application of heat generated by coal combustion specifically for that purpose.

- CAA section 111 defines “standard of performance” to mean “a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated” [42 U.S.C. 7411(a)(1)].

- Another provision in CAA section 111 provides that standards of performance must represent the best “technological system of continuous emission reduction,” *see, e.g.*, 42 U.S.C. 7411(g)(4), which is defined to include “a technological process for production or operation by any source which is inherently low-polluting or nonpolluting” [42 U.S.C. 7411(a)(7)(A)]. This provision further demonstrates that EPA must evaluate mechanical, indirect, and recirculation dryers, as each is inherently low polluting, in comparison to once-through coal-fired thermal dryers.

- CAA section 111 requires “specific and rigorous limits on the amounts of pollutants that may be emitted.” *ASARCO, Inc. v. EPA*, 578 F.2d 319, 322 (DC Cir. 1978). The legislative history of this requirement confirms Congress’s determination that “[t]he maximum use of available means of preventing and controlling air pollution is essential to the elimination of new pollution problems \* \* \*” S. Rep. No. 1196, 91st Cong., 2d Sess. at 16. In revising the standards of performance for coal

preparation plants, EPA may not simply codify existing levels of performance.

- Because NSPS apply only to new, modified, or reconstructed sources and must reflect application of the best demonstrated system of reduction, they do not have to be achievable for all types of existing sources. *See Portland Cement*, 486 F.2d at 391. Nor can EPA forego setting limits reflecting the best demonstrated system merely because some sources may prefer a different system, *ASARCO*, 578 F.2d at 322 (“NSPS are designed to force new sources to employ the best demonstrated systems of emission reduction.”). The legislative history of CAA section 111 demonstrates that Congress intended for EPA to prescribe standards that override the design preferences of regulated sources: “[T]he emission standards shall provide that sources of such emissions shall be designed and equipped to prevent and control such emissions to the fullest extent compatible with the available technology and economic feasibility. \* \* \*” H.R. Rep. No. 1146, 91st Cong., 2d Sess. at 10 (emphasis added). Thus, EPA’s assumption that NSPS must be set at levels lenient enough to accommodate all types of existing dryers is contrary to Congress’ plainly expressed intent.

- CAA section 111 “looks toward what may fairly be projected for the regulated future, rather than the state of the art at present. \* \* \*” *Portland Cement Assn v. Ruckelshaus*, 486 F.2d 375, 391 (DC Cir. 1973). An “achievable standard is one \* \* \* within the realm of the adequately demonstrated system’s efficiency and which, although not at a level that is purely theoretical or experimental, need not necessarily be routinely achieved within the industry prior to its adoption.” *Essex Chemical Corporation v. Ruckelshaus*, 486 F.2d 427, 433–34 (DC Cir. 1973). Instead of looking toward a future of mechanical dryers and indirect thermal dryers, or even gas-fired recirculation thermal dryers, the proposed standards attempt to lock-in standards that reflect the performance of coal-fired once-through thermal dryers.

- Even assuming for the sake of argument that it is permissible to set a standard for emissions from coal drying that presumes the use of thermal dryers, the proposed rule violates the straightforward intent of Congress. Congress purposefully chose the superlative “best” to describe the system of emissions reductions on which the NSPS were to be based [42 U.S.C. 7411(a)(1)]. Moreover, one of the enumerated purposes of the NSPS was to create incentives for new technology.

CAA Conference Report: Statement of Intent; Clarification of Select Provisions, 123 Cong. Rec. 27071 (1977). However, instead of proposing standards based on the performance of the cleanest new coal drying technologies, the proposal sets lax standards and then allows a mix of coal drying technologies to meet those standards.

*Response:* EPA followed the statutory requirements of CAA section 111 in its review of the existing standard of performance for thermal dryers at coal preparation and processing plants. The review was conducted pursuant to the requirement in section 111(b)(1)(B) that EPA review and revise, if appropriate, the previously promulgated standards of performance. Section 111(b)(1)(B) requires EPA, when revising the standards, to follow the procedure required for the promulgation of standards. Section 111(b)(1)(B) further requires publication of proposed regulations, an opportunity for written comment, and requires the Administrator to promulgate such standards as she “deems appropriate.” The commenter correctly noted that a standard of performance is defined as “a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.” 42 U.S.C. 7411(a)(1). The commenter, however, takes the language from 42 U.S.C. 7411(g)(4) out of context. CAA section 111(g)(4) provides that the Administrator shall revise a standard of performance upon application of the Governor of a State that meets certain criteria. The language quoted by the commenter appears in this section and describes what must be included in the application of the Governor, and does not modify the definition of a standard of performance in section 111(a)(1).

To determine the appropriate level for a particular standard of performance, EPA conducts an analysis to determine what emission rates reflect application of “best demonstrated technology” or BDT. This BDT analysis includes consideration of available emission controls and technologies. In the BDT analysis for controlling PM emissions from coal dryers for this final rule, EPA explicitly considered alternate processes for drying coal as well as add-on emission control technologies. For modified facilities, EPA recognized the limitations that may be associated with

the physical layout of existing dryers. For reconstructed facilities and new facilities, however, we concluded that design options, and alternative replacement technologies, could be taken into account during the reconstruction or construction process. EPA concluded that recirculation thermal dryers and indirect thermal dryers are both adequately demonstrated and readily available technologies for drying coal. It did not restrict its analysis, or the definition of affected facility, to the once-through direct contact thermal dryers covered by the existing NSPS standards for thermal dryers. Contrary to the commenter's assertions, EPA neither presumed the use of existing once-through direct contact thermal dryers nor merely codified existing levels of performance achieved by such dryers. Instead, EPA concluded that BDT for controlling PM emissions for new and reconstructed thermal dryers is fabric filters applied to recirculation thermal dryers and indirect thermal dryers. The PM standards in the final rule are based on these conclusions.

Although mechanical coal drying technologies, because they do not burn fuel, may inherently produce lower air pollutant emissions compared to some thermal drying technologies, they may not be technically applicable, cost-effective, or the most energy efficient for all possible coal drying applications that could be subject to subpart Y. EPA does not, at this time, have data to support a conclusion that standards based on an assumption that mechanical dryers are BDT would be achievable by the industry as a whole (*see National Lime Ass'n v. EPA*, 627 F.2d 416, 431 (1980)). Even though the "adequately demonstrated" requirement does not "necessarily impl[y] that any [covered facility] now in existence be able to meet the proposed standards," *Portland Cement*, 486 F.2d at 391, EPA must demonstrate that the standard is, in fact, achievable taking into consideration variables that may affect emissions in different circumstances and at different plants. *National Lime*, 627 F.2d at 433. In fact, the type of coal drying technology used at a given facility is influenced by a variety of factors, including type of facility, coal moisture reduction requirements, availability of waste heat sources at the coal processing location, and drying process energy requirements including electrical power consumption. Mechanical drying techniques are not suitable replacements for thermal dryers under all circumstances. Mechanical drying techniques can remove free moisture

adsorbed onto the surface of the coal particles, as well as a portion of the hygroscopic moisture contained by capillary action within microfractures in the coal particles, but are ineffective at removing inherent moisture (and, thus, would only be applicable at preparation plants utilizing coal washing). Some type of thermal energy is required to remove the interstitial and molecular (inherent) moisture from the coal for applications where extremely low moisture content is desirable. Therefore, mechanical drying techniques are not suitable replacements for thermal dryers under all circumstances, and because waste heat is not available at all locations, thermal dryers using waste heat are not a technically possible substitute for thermal dryers in all situations. EPA will continue to follow the development of mechanical drying techniques. To the extent the commenter is suggesting that EPA should require use of a certain technology for drying coal and coal preparation plants, EPA notes that CAA section 111(h), 42 U.S.C. 7411(h)(1) only allows the Administrator to promulgate design, equipment, work practice, or operational standards if "in the judgment of the Administrator, it is not feasible to prescribe or enforce a standard of performance." No such finding has been made here.

In the BDT analysis for controlling SO<sub>2</sub> emissions from coal dryers for the final rule, EPA determined that BDT for modified and reconstructed thermal dryers is a wet scrubber with a scrubbing reagent (*e.g.*, an upgraded venturi scrubber with sodium hydroxide or packed bed scrubber with lime). The information that EPA has indicates that all of the once-through direct contact thermal dryers currently use venturi scrubbers for PM control. Thus, the upgraded venturi scrubber with sodium hydroxide or the packed bed scrubber with lime (would be in addition to the venturi scrubber) would provide SO<sub>2</sub> control, along with additional PM control necessary for reconstructed thermal dryers to meet their PM and opacity limits. For new thermal dryers, we determined that BDT for controlling SO<sub>2</sub> emissions is the injection of sodium hydroxide directly to the venturi scrubber fluid or injection of a sodium-based sorbent into the combustion gases prior to the drying chamber. For a new once-through direct contact thermal dryer, the caustic injection into the scrubber fluid for SO<sub>2</sub> control would be in addition to a high-energy venturi scrubber which is the likely control technology that would be used for PM and opacity control. For a new coal

recirculation thermal dryer, sorbent injection into the combustion gases for SO<sub>2</sub> control would be used in conjunction with a fabric filter which is the likely control technology that would be used for PM and opacity control. EPA determined that BDT for controlling NO<sub>x</sub> emissions from new, reconstructed, and modified thermal dryers is combustion controls. Combustion controls can be used across the range of thermal dryers currently in use. Combustion controls include low NO<sub>x</sub> burners, staged combustion, co-firing with natural gas or liquefied petroleum gas, and flue gas recirculation. BDT for controlling CO emissions was determined to be good combustion practices. Good combustion practices limit the formation of CO (and VOC) by providing sufficient oxygen in the combustion zone such that complete combustion can occur. Maintaining appropriate combustion zone temperature and gas residence time also are good combustion practices, as is proper operation and maintenance of the dryer.

*Comment:* Several commenters stated that the proposed PM emission limit of 0.010gr/dscf for new coal dryers does not reflect an adequate margin of compliance to the fabric filter test data used and that the proposed limit needs to be less stringent because the test data do not represent a demonstration of the performance of control technology over the life of the facility and over the range of operating conditions that may be encountered at thermal dryers. Therefore, the commenters recommended that the PM emission limit remain at the current NSPS emission rate of 0.031 gr/dscf. Other commenters presented an opposing argument that the proposed PM limit needs to be lower. The commenters asserted that the compliance margin of two to three times applied by EPA to fabric filter test data is unjustified in that EPA has not explained why use of a fabric filter to control PM emissions would require such a large margin of safety, given the demonstrated performance of fabric filters for the subject source as well as similar sources in numerous other industries.

*Response:* EPA has reviewed the available PM emissions and permit data for thermal dryers; no additional PM data were provided during the public comment period. We believe that the proposed PM limit of 0.023 g/dscm (0.010 gr/dscf) for new thermal dryers is appropriate. We further believe that, in the presence of limited data showing actual emissions, permit information can be useful in determining whether a particular emission limit is achievable

by sources in the source category. EPA has available three emission test data points for fabric filters installed on thermal dryers, including two tests one year apart at one facility. We believe that these three data points provide adequate information on the performance of the technology. However, EPA also has examined the permit data which identifies emission limits agreed upon between State regulators and the regulated community and believe that the emission limits contained in permits constitute limits that could be achieved over the range of operating conditions to be found within the industry. *Nat'l. Lime Ass'n. v. EPA*, 627 F.2d 416, 431 (DC Cir. 1980) requires EPA to show that the limit selected is achievable under different conditions at an individual plant and conditions at different plants. EPA believes that basing the emission limit on use of the data points from two facilities, including two data sets from one facility, in conjunction with the permit data, adequately accounts for the variability to be found within the industry. Therefore, the final rule reflects no changes to the proposed PM emission limit for new thermal dryers.

*Comment:* Two commenters supported the proposal to revise the PM limit for units reconstructed after April 28, 2008, to 0.045 g/dscm (0.020 gr/dscf) and to maintain the existing 1976 rule's opacity limit of less than 20 percent. In contrast, a third commenter disagreed with the proposed PM standard for reconstructed dryers, which is twice as high as the proposed standard for new dryers (0.010 gr/dscf). The commenter stated that EPA must either require reconstructed dryers to meet the same PM standards as new dryers, or explain why such limits do not reflect BDT for reconstructed dryers. The commenter further stated that EPA has not explained why it would not also be feasible to further modify existing dryers, at the time of reconstruction, by converting them to recirculation dryers or by otherwise modifying them to use fabric filters, and that EPA must examine whether a fabric filter is a feasible option for control of PM emissions from reconstructed dryers. Another commenter recommended that the PM emission limitations not be changed from the current NSPS emission rate of 0.031 gr/dscf. The commenter believes that the limited data EPA has cited to justify reducing the limit by a third for reconstructed dryers using the same control technology is insufficient to conclude that thermal dryers with the specified control equipment would, throughout

the life of the facility, be able to continuously meet a lower emission limit than the current NSPS provide.

*Response:* EPA agrees that units undergoing reconstruction as defined in the CAA could undergo the conversions necessary to install BDT for PM emissions control for new thermal dryers and, thus, meet the PM and opacity limits of new facilities. Thus, the regulation has been changed accordingly.

*Comment:* One commenter stated that information in the supplemental proposal preamble and support documentation show that the SO<sub>2</sub> emissions limits for new and reconstructed coal dryers should be set lower than the proposed level. The commenter explained that the proposal preamble states that “[w]et scrubbers designed specifically for SO<sub>2</sub> control are able to achieve greater than 95 percent reduction.” EPA, however, dismisses wet scrubbers from further consideration, as the wet scrubbers currently used on existing thermal dryers are designed for PM control and not specifically for SO<sub>2</sub> controls, and high levels of SO<sub>2</sub> control may be difficult to achieve without redesign of the wet scrubber. The commenter asserted that this is not a valid reason for eliminating a viable technology from consideration, and that wet scrubbers are widely used on similar sources and, as EPA recognizes, routinely achieve greater than 95 percent reduction. Even if EPA ultimately determines that wet scrubbers are not BDT for SO<sub>2</sub> control for some coal dryers, the commenter stated that the subpart Y SO<sub>2</sub> emission limit must be more stringent for those dryers. The commenter cited as support EPA's assertion that sorbent injection controls that use sodium-based agents can meet removal efficiencies of 90 percent.

*Response:* EPA indicated in the May 27, 2009, supplemental proposal that it was considering an SO<sub>2</sub> percent reduction requirement of between 50 and 90 percent for the final rule (74 FR 25311). EPA has reviewed the available data and believes that a 90 percent removal requirement is appropriate for new, reconstructed, and modified thermal dryers. Affected facilities that meet the alternative SO<sub>2</sub> emissions limit of 85 ng/J (0.20 lb/MMBtu) heat input are not required to meet this requirement.

*Comment:* Many commenters stated that EPA's proposal to set a combined NO<sub>x</sub> and CO emissions limit for coal dryers is inappropriate. Another commenter stated explicitly that separate NO<sub>x</sub> and CO emissions limits must be set for coal dryers. Reasons

cited by individual commenters include the following.

- A combined NO<sub>x</sub>/CO limit enables permitting authorities to trade off higher NO<sub>x</sub> emissions for lower CO emissions, and vice versa. EPA's proposed approach of allowing States to trade NO<sub>x</sub> and CO emissions at essentially a 1:1 ratio ignores that CO and NO<sub>x</sub> are different pollutants that do not have equivalent environmental impacts.

- A combined NO<sub>x</sub>/CO limit violates CAA for the reason that the proposed combined limit is based on an assumed CO emissions rate that does not reflect application of the best system of emission reduction. EPA admits that the presumed levels of CO emissions (0.45 lb/MMBtu for modified and reconstructed dryers and 0.25 lb/MMBtu for new dryers) are levels that are already surpassed by nearly all existing industrial boilers and has not explained why industrial boilers would be capable of meeting more stringent CO limits than thermal dryers.

- Test data provided in the docket indicates a wide variation in test results, especially for CO. Test data is almost exclusively based on bituminous coal drying operations, and these data do not support the conclusion that the proposed combined NO<sub>x</sub>/CO limit is applicable across all grades of coal.

- Combustion controls currently represent BDT in use by the source category. Going beyond the demonstrated technologies for the source category (e.g., incorporating post combustion control technologies, specifically selective non-catalytic reduction (SNCR) on new thermal dryers) is not required in developing NSPS.

- EPA does not have sufficient data to support the proposed NO<sub>x</sub> standards, and EPA has not demonstrated that thermal dryers with different design and function can meet the same limitations as coal-fired boilers. Also, EPA has identified combustion controls that may not be available as the basis for the proposed NO<sub>x</sub> standards, especially for existing thermal dryers.

*Response:* EPA believes that the use of a combined NO<sub>x</sub>/CO limit is appropriate because it acknowledges the inherent trade-off between the two pollutants (i.e., a decrease in emissions of one often leads to an increase in emissions of the other). EPA has based the combined NO<sub>x</sub>/CO limit on what it believes to be adequate data from thermal dryers at subpart Y facilities; thus, the comparison to industrial boilers is misplaced. In addition, as the Court has noted, “[t]he ‘adequately demonstrated’ requirement does not imply that any [covered facility] now in

existence be able to meet the proposed standards. CAA section 111 looks toward what may be fairly be projected for the regulated future, rather than the state of the art at present.” *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375, 391 (DC Cir. 1973).

*E. Coal Processing and Conveying Equipment, Coal Storage Systems, Transfer and Loading Systems, and Open Storage Piles Standards*

*Comment:* Many commenters acknowledged EPA’s decision in the supplemental proposal to add fogging systems and passive enclosure containment systems (PECS) to its list of BDT for coal processing and conveying equipment, but stated that EPA’s BDT determination still failed to meet the requirements of CAA § 111. Additional commenters also disagreed with EPA’s finding of chemical suppression to be BDT for coal handling equipment processing bituminous coal, stating that EPA’s current BDT approach of focusing only on emission control systems with the highest control efficiency is an inappropriate, unjustified departure from its prior technology assessments for coal preparation plants. Commenters stated that EPA’s evaluation of technologies for control of fugitive emissions from coal-handling should have included wet suppression. Further, commenters asserted that EPA must explain why it has either rejected or ignored Peabody Energy’s compelling comparison of wet suppression costs and chemical suppression costs. The commenters believe that the record demonstrates that cost considerations favor the use of wet suppression instead of chemical suppression for controlling fugitive emissions from preparation facilities at coal mines.

*Response:* As pointed out by the commenters, EPA has added fogging systems and PECS as technologies representative of BDT for coal-handling equipment processing subbituminous and lignite coals (fabric filters and wet extraction scrubbers also are considered representative of BDT). As noted in the supporting documentation (*see* EPA–HQ–OAR–2008–0260–0083, pp. 1–2), EPA has reviewed our determination of chemical suppressants as BDT for coal-handling equipment processing bituminous coal. However, as also noted in the support document, an owner/operator may use any combination of controls at a particular site as long as the requirements of subpart Y are met. With respect to Peabody Energy’s comparison of wet suppression and chemical suppression costs, their estimates indicate that the incremental cost of chemical suppression as

compared to wet suppression is \$4,400 per ton of PM removed.

*Comment:* Many commenters stated that the data used by EPA does not demonstrate the continuous achievability of the proposed opacity limit of 5 percent. Commenters further stated that the promulgation of NSPS based upon inadequate proof of achievability would defy the Administrative Procedure Act’s mandate against action that is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law. *National Lime Ass’n v. EPA*, 627 F.2d 416, 430 (DC Cir. 1980).

*Response:* In the May 27, 2009, supplemental proposal, EPA requested comment on whether an opacity limit of less than 10 percent is more appropriate than the proposed limit of 5 percent. We also requested comment on whether the 5 percent limit is achievable on a long-term basis for all subpart Y coal-handling facilities under all operating conditions and whether the limit provides an adequate compliance margin. As we pointed out in supporting documentation (*see* EPA–HQ–OAR–2008–0260–0083, pp. 3–4), the data used to establish the supplemental proposal’s 5 percent opacity level were primarily from initial compliance tests, and the reported highest 6-minute average opacity reading was 5 percent for a recently installed facility. Data for coal handling facilities submitted by commenters in response to the supplemental proposal indicate that 60 percent of the highest 6-minute average opacity readings are less than 10 percent. Upon reconsideration of EPA’s data and consideration of the public comments and supporting data, EPA has determined that an opacity limit of less than 10 percent is more appropriate for all coal-handling equipment. An opacity limit of 10 percent will allow for control equipment degradation, adverse conditions, and variability that would not be reflected in initial compliance tests. Thus, the final rule requires coal handling facilities to maintain opacity levels of less than 10 percent.

*Comment:* Many commenters requested that subpart Y provide the same compliance alternative for affected sources located in enclosed buildings as that provided in 40 CFR part 60, subpart OOO. Under subpart OOO, performance standards and applicable monitoring techniques for the exhaust systems of these buildings have been specified as an appropriate alternative to individual compliance by each affected facility enclosed within the building. Commenters explained that building enclosure of certain coal handling and

processing operations at coal preparation plants has become more commonplace throughout the industry for several reasons, including the ability to effectively control emissions and to protect personnel and equipment from the elements. These commenters urged EPA to extend this practical and achievable alternative to subpart Y and recognize within the rule the beneficial control technique of enclosing coal preparation facilities within buildings.

*Response:* EPA has determined that if a building in which affected coal processing and conveying equipment (*e.g.*, breakers, crushers, screens, conveying systems), coal storage systems, and coal transfer system operations are enclosed is found to be in compliance with the subpart Y limits applicable to the affected facilities enclosed in the building, then the affected facilities enclosed in that building also are in compliance. Because exhaust from a building that encloses affected facilities would be comprised of exhaust from the affected facilities, it follows that in order for the building to be able to meet a specific PM or opacity limit, each facility enclosed in the building also would have to meet that same PM or opacity limit. If the affected facilities enclosed in the building are subject to different emission limits, the affected facilities are deemed in compliance only if the building is in compliance with the most stringent of the limits applicable to the enclosed affected facilities.

*Comment:* Many commenters stated that EPA does not have the authority to regulate coal storage piles under 40 CFR part 60. Section 60.1 provides that the provisions of 40 CFR part 60 “apply to the owner or operator of any stationary source which contains an affected facility \* \* \*” Stationary source is defined in section 60.2, consistent with 42 U.S.C. 7411, as including any building, structure, facility or installation. Commenters asserted that although it is not clear that a coal pile constitutes a building, structure, facility or installation, if it does, under section 60.1 the stationary source must also contain an affected facility. Further, affected facility is defined in section 60.2 as “with reference to a stationary source, any apparatus to which a standard is applicable.” According to commenters, this latter definition presents a substantial problem in that if EPA wishes to regulate coal storage piles under 40 CFR part 60 as part of a stationary source, the coal storage piles must be an apparatus. At many facilities which manage coal, commenters explained that coal storage piles are nothing more than what the name

suggests: piles of coal, and these piles often have no walls, no floor surfaces, and no equipment associated with their use. Although the term "apparatus" is an undefined term under 40 CFR part 60, commenters do not believe that a pile of minerals mined from the earth and stored on the earth constitutes an "apparatus" which subjects the pile to regulation under 40 CFR part 60. Further, although the authority may not exist to regulate coal storage piles under 40 CFR 60, commenters contend that this would not leave such storage piles unregulated. In many States, fugitive emissions from coal piles are regulated under State fugitive emissions limitations which are often incorporated into State implementation plans, and the commenters do not challenge those regulations.

*Response:* EPA disagrees with commenters' assertion that a coal pile cannot be an affected facility under 40 CFR 60. Commenters correctly noted that the term "affected facility" is defined in section 60.2 to mean "with reference to a stationary source, any apparatus to which a standard is applicable." The commenters also correctly note that the term "apparatus" is undefined in 40 CFR part 60, and an agency's interpretation of its own regulation is granted substantial deference (*see, e.g., Auer v. Robbins*, 519 U.S. 452, 461, 1997).

The commenters do not offer a definition of "apparatus" but appear to suggest that to be an "apparatus" a coal pile would need to have "walls, floor surfaces, or equipment associated with their use." The commenters, however, offer no support for this assertion, and EPA does not believe such a limited definition of "apparatus" would be reasonable or consistent with the plain English meaning of the word. Further, the Courts stated "In designating what will constitute a facility in each particular industrial context, EPA is guided by a reasoned application of the terms of the statute it is charged to enforce." *ASARCO Inc. v. EPA*, 578 F.2d 319, 324 n.17 (1978). In this case, because coal storage piles are significant sources of emissions and are physically located at coal preparation and processing plants, EPA believes it is reasonable in this context, to determine that they are facilities that can be subject to regulation.

The dictionary definition of the word "apparatus" also supports EPA's approach. The word "apparatus" has a very broad meaning and can include tangible items such as equipment, tools and materials as well as intangible items such as activities and functions. The Random House College Dictionary:

Revised Edition defines the word "apparatus" as follows:

1. A group or aggregate of instruments, machinery, tools, materials, *etc.* intended for a specific use. 2. any complex instrument or machine for a particular purpose. 3. any system of activities, functions *etc.* directed toward a specific goal: the apparatus of government. 4. a group of structurally different organs performing a particular function.

Because a coal pile constitutes "a group or aggregate of \* \* \* materials \* \* \* intended for a specific use," it qualifies as an "apparatus" under the first definition of the word. Furthermore, given the broad meaning of the term "apparatus," EPA believes it would not be reasonable to interpret this term to limit the scope of the definition of "affected facility" to exclude a significant part of the coal preparation and processing plant that may have significant emissions.

In addition, although commenters do not actually argue that a coal pile does not constitute a stationary source because it is not a building, structure, facility, or installation, EPA notes that there can be no doubt that a pile of coal does in fact qualify as a stationary source as that term is defined in 42 U.S.C. 7411 and section 60.2. Stationary source is defined in 42 U.S.C. 7411 as including "any building, structure, facility or installation which emits or may emit any air pollutant." This same definition appears in section 60.2. The terms building, structure, facility, or installation, are not defined although section 60.2 does contain definitions for "affected facility" and "existing facility." In some instances, the regulated affected facility may be a portion or a part of a stationary source, but not the entire source. In other circumstances, however, a stationary source may also be an affected facility. Because, as noted above a coal pile can be an affected facility it necessarily also can be a facility within the definition of stationary source. In addition, the terms installation and structure are very broad and not limited to things that have walls, floor surfaces or dedicated equipment. For these reasons, commenter's assertion that coal piles cannot be regulated under 40 CFR part 60 is without support.

*Comment:* Several commenters stated that coal piles should not be regulated under subpart Y because of the diverse conditions affecting emissions from coal storage piles that could be encountered at each coal preparation plant site. Among the site-specific factors for open coal storage piles that will vary widely from site to site are the following: ambient temperature, precipitation,

meteorology, wind speed, and geography. In addition, commenters stated that fugitive emissions will depend on coal properties and coal rank. Therefore, a uniform NSPS is not appropriate for coal piles and fugitive coal dust emissions from coal piles should be addressed by case-by-case determinations in individual permit proceedings.

*Response:* EPA does not agree with the commenters that coal piles should not be regulated under subpart Y. Such sources were apparently included in the October 1974 proposed rule (*i.e.*, there was no specific exclusion). A comment was received indicating that no fugitive dust control options were available for open storage piles other than water sprays and that these were not effective on windy days. EPA subsequently excluded open storage piles from regulation in the final rule (January 1976). However, EPA has now identified additional control measures, beyond simple water sprays, that may be utilized on coal piles and that address the concerns noted by commenters. EPA is establishing work practice standards instead of standards of performance for coal piles. Owners/operators are required to develop a fugitive coal dust emissions control plan to control emissions from the coal piles, and the plan requirements established by EPA provide adequate flexibility for an owner/operator to tailor their plan to address site-specific factors.

*Comment:* Several commenters stated that it is not feasible to establish emission standards for open storage piles or roadways, and if open storage piles are to be regulated by subpart Y then the only appropriate method for controlling PM emissions from such sources is by using work practice standards. Another commenter does not support establishing an opacity limit for open storage piles or roadways and concurred with the proposal to establish work practice standards instead of opacity or PM limits. If an opacity limit is established for storage piles, the commenter stated that it should be limited to stationary open storage piles not including piles of coal that have been loaded into trucks, railcars, and/or ships. An additional commenter disagreed that only work practices are suitable for controlling PM emissions open storage piles (and roadways). The commenter indicated that a 20 percent opacity limitation under subpart Y has been an existing applicable requirement for fugitive dust sources in the coal-handling system for decades, and it has not been proven infeasible to conduct opacity monitoring over all of those years.

*Response:* As explained in a later response, EPA is not finalizing its proposed requirements for roadways. EPA concurs that, at this time, it is not feasible to prescribe or enforce a standard of performance for open storage coal piles and has therefore promulgated work practice standards, which EPA believes provide the most effective method of limiting emissions from open storage piles. In addition, EPA believes that the size of open storage coal piles currently makes the use of Method 9 opacity observations unreasonable in many situations.

*Comment:* Many commenters stated concerns about the inherent difficulties in determining when an open storage pile is “reconstructed” or “modified.” Commenters contend that there is simply no way that an “increase in the emission rate” of PM or any other pollutant could be measured with any certainty for an open coal storage pile. Unlike other “affected facilities” or plant equipment, commenters explained that open storage piles by their nature fluctuate in size and activity. As the subpart Y amendments were proposed, any time large coal inventory was added to an open storage pile and then reclaimed, subpart Y potentially could be triggered. Commenters stated that if EPA proceeds with the establishment of work practices for coal piles, EPA should provide clarification and guidance as to what constitutes a physical or operational change for an open storage pile through a subsequent rulemaking proposal that would allow public review and comment. Commenters requested that EPA limit the applicability of the subpart Y control requirements for coal storage piles to only new sources.

*Response:* EPA agrees with the commenters that open storage piles are always changing (*i.e.*, coal is being added and coal is being removed for processing) and, for purposes of subpart Y, we do not consider the routine addition and removal of coal to be a physical change or a change in the method of operation. A change to an open storage pile that requires the source’s operating permit be opened for revision may be a modification or reconstruction of the storage pile. Instances where a physical change or change in the method of operation of an open storage pile will result in an increase in emissions would be considered a modification or reconstruction (*e.g.*, increasing the permitted size of the storage pile). Changes to the equipment used in loading, unloading, and conveying operations of open storage piles are among the things that can be assessed in

order to determine when an open storage pile has been reconstructed or modified. Thus, in the final rule, EPA defines “open storage pile” to mean “any facility, including storage area, that is not enclosed that is used to store coal, including the equipment used in the loading, unloading, and conveying operations of the facility.” The inclusion of a definition for “open storage pile” should provide additional clarification as requested by the commenters. In addition, 40 CFR 60.5 provides that when requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

*Comment:* Several commenters agreed that piles of coal that have been loaded into trucks, railcars, and/or ships should not be subject to the subpart Y control requirements for open storage piles. In contrast, several other commenters disagreed with EPA’s stated rationale for proposing the exclusion. Specifically, commenters provided the following reasons: (1) EPA has not identified any information or data to support its statement that fugitive dust emissions from these sources are not significant; (2) it is not economically infeasible to require covering the coal or chemical encrustation on loaded trucks, railcars, and ships because operators may choose to use these controls to comply with State and local regulations or the desire to minimize the loss of coal while in transit; and (3) EPA did not consider the use of alternate work practice standards already identified as appropriate for open piles, including the use of wet suppression. Commenters further stated that EPA should recognize that the owners/operators of coal preparation plants, as the ones who determine the placement of coal into trucks, railcars, and ships, and as the ones who initiate the use of any appropriate controls, are uniquely situated to take the steps most effective at reducing or limiting fugitive dust emissions from these sources once they leave the facility. Although some of the emissions from piles loaded into trucks, railcars, and ships may occur beyond the boundaries of the coal preparation plant, commenters stated that the extent of these emissions depends on actions taken at the coal preparation plant.

*Response:* EPA is not addressing at this time emissions from the sources noted by the commenters because we found any such regulation to be impractical to enforce (particularly with

regard to interstate shipments). Further, based on available data emissions from these sources while at the coal preparation and processing plant have not been shown to be significant and, at this time, EPA has no data on emissions from such sources while enroute.

*Comment:* Many commenters requested clarification regarding the plant roadways to which EPA intends subpart Y to apply. Commenters stated that EPA should clarify that “roadways” such as haul roads that do not leave the plant property are not subject to subpart Y. Commenters also stated that EPA needs to clearly define where the coal preparation plant begins and where the coal mine ends, and that subpart Y is applicable only to affected facilities of a coal preparation plant. Other commenters disagreed with EPA’s proposal to exclude roadways that do not leave the property (*e.g.*, haul roads at coal mines) from being subject to subpart Y.

*Response:* As previously noted, EPA has decided not to finalize the work practice standards that were proposed for roadways. Emissions associated with roadways at both the “active mining area” and the “coal preparation plant” are also subject to regulation under SMCRA. Under the definition of “surface coal mining operations” contained in 30 CFR 70.5 (SMCRA), operations conducted within a coal preparation plant are covered under SMCRA:

(a) Activities conducted on the surface of lands in connection with a surface coal mine \* \* \* the products of which enter commerce or the operations of which directly or indirectly affect interstate commerce. Such activities include \* \* \* *the cleaning, concentrating, or other processing or preparation of coal. Such activities also include the loading of coal for interstate commerce at or near the mine site* (emphasis added).

Such operations also include roads (under 30 CFR 701.5). 30 CFR 780.15 requires the following:

(a) For all surface mining activities with projected production rates exceeding 1,000,000 tons of coal per year and located west of the 100th meridian west longitude, the application shall contain an air pollution control plan which includes the following:

(1) An air quality monitoring program to provide sufficient data to evaluate the effectiveness of the fugitive dust control practices proposed under paragraph (a)(2) of this section to comply with Federal and State air quality standards; and

(2) A plan for fugitive dust control practices as required under 30 CFR 816.95.

(b) For all other surface mining activities the application shall contain an air pollution control plan which includes the following:

(1) An air quality monitoring program, if required by the regulatory authority, to



provide sufficient data to evaluate the effectiveness of the fugitive dust control practices under paragraph (b)(2) of this section to comply with applicable Federal and State air quality standards; and

(2) A plan for fugitive dust control practices, as required under 30 CFR 816.95.

30 CFR 816.95(a) specifies:

All exposed surface areas shall be protected and stabilized to effectively control erosion and air pollution attendant to erosion.

30 CFR 816.150 provides some additional requirements:

(b) *Performance standards.* Each road shall be located, designed, constructed, reconstructed, used, maintained, and reclaimed so as to:

(1) Control or prevent erosion, siltation, and the air pollution attendant to erosion, including road dust as well as dust occurring on other exposed surfaces, by measures such as vegetating, watering, using chemical or other dust suppressants, or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices \* \* \*

(e) *Maintenance.* (1) A road shall be maintained to meet the performance standards of this part and any additional criteria specified by the regulatory authority.

Thus, SMCRA covers fugitive dust emissions from roads at coal preparation and processing plants at mine sites and requires a fugitive dust plan and other requirements to control air pollution from such sources (through similar measures as were included in the supplemental proposal for subpart Y). EPA believes that coal moving operations, once the coal enters the "coal preparation plant," will be by conveyor rather than by truck. Therefore, EPA believes that the requirements of SMCRA are sufficient to address air emissions from roadways that may be found within a coal preparation and processing plant at mine sites. For coal preparation plants at end-user facilities, EPA believes that, again, once the coal enters the "coal preparation plant," coal moving operations will be by conveyor rather than by truck. Therefore, EPA has decided not to finalize the proposed requirements for roadways.

Where fugitive coal dust emissions control plan requirements under subpart Y for open storage piles overlap requirements under SMCRA or State regulations, those sources may submit the more stringent of the required monitoring plans to the Administrator or delegated authority as required by 40 CFR 60.254(c).

*Comment:* One commenter requested that EPA delete the proposed fugitive emission control plan requirements from the final subpart Y amendments

for the following reasons: (1) regulated entities have the right to know exactly what requirements apply to their facilities, particularly those applicable to new sources, and the proposed language does not provide any objective basis for determining what might have to be included or how to comply; (2) making fugitive emission control plan requirements subject to negotiation and air regulatory agency approval adds potentially significant delays in getting new sources approved and into operation; (3) fugitive emission control plans to minimize emissions from coal piles and roadways are commonly embodied in State implementation plans and existing air permits for iron and steel plants and coke plants; and (4) subpart Y should not duplicate and should not conflict with existing fugitive emission control requirements that have been in place for many years in the title V operating permits.

Many commenters stated that EPA has failed to properly develop revisions to subpart Y in accordance with established procedures for developing NSPS that specifically designate each type of affected facility subject to proposed standards. The commenters contend that this failure to designate each type of facility appears to be an open-ended and indeterminate expansion of subpart Y. According to commenters, this intent is further reflected in preamble language indicating that proposed procedures for developing a "fugitive dust plan" must include procedures for limiting emissions from "all types" of coal processing and conveying equipment at coal preparation plants (74 FR 25312). The commenters stated that it is unclear what EPA means by "all types" of equipment when "coal processing and conveying equipment" has a well-settled meaning within subpart Y. Further, the commenters noted that the proposed rule amendments do not, but should, make clear that an owner/operator can choose from the methods stated in the rule or an alternative method, if one exists, approved by the permitting authority. As currently proposed, any alternative methods would have to be approved by the Administrator, and the commenters consider such a requirement to be unduly burdensome. Commenters contend that the regulation should acknowledge that fugitive emissions control measures might not be available when temperatures are below freezing, and that prevailing weather conditions may reduce the effectiveness of, or eliminate the need for, a particular control method on a given day.

*Response:* EPA disagrees that fugitive coal dust emission control plans should not be required by the NSPS. The commenter states that such plans are "commonly" embodied in State implementation plans but does not suggest that they are contained within all such plans. Adding to the NSPS a requirement that sources must control fugitive coal dust emissions from fugitive sources at the facility by operating according to a written fugitive coal dust emissions control establishes a uniform requirement that applies to all sources in the subpart Y source category. The final rule also provides very specific requirements regarding the control measures that must be included in the fugitive coal dust emissions control plans. The fugitive coal dust emissions control plan must identify and describe the control measures the owner/operator will use to minimize fugitive coal dust emissions from each affected facility addressed in the plan. The owner or operator is also required to explain how the measures are applicable and appropriate for the site conditions. The owner/operator may petition the Administrator requesting approval of a control measure other than those specified in the final rule. The petition must either demonstrate that the alternate control measure will provide equivalent overall environmental protection or demonstrate that it is either economically or technically infeasible for the affected facility to use the control measures specifically identified in the final rule. The final rule clarifies that the owner/operator must submit a fugitive coal dust emissions control plan that includes the alternative measures along with the petition and operate in accordance with that plan while the petition is pending. It further clarifies that while operating in accordance with the plan that includes the alternative control measures, the affected facility is considered to be in compliance with the fugitive coal dust emissions control plan requirements while the petition is pending.

EPA has decided to omit, from the rule, the proposed requirement that the fugitive coal dust emissions control plan address "other site-specific sources of fugitive emissions that the Administrator or permitting authority determines need to be included." EPA agrees with the commenters that subpart Y should specifically identify each type of affected facility that must be addressed in fugitive dust emissions control plan. As explained earlier in this preamble, EPA also has decided not to address roadways under subpart Y at



this time. Thus, open storage coal piles are currently the only affected facilities that must be addressed by the plan. As pointed out by the commenters, an owner/operator must either use one of the control measures specifically identified in subpart Y or, alternatively, seek approval from the Administrator to use an alternate control measure. Because the NSPS is a Federal standard, we believe it is appropriate for the Administrator to be the one who makes determinations regarding whether an alternative control measure achieves equivalent overall environmental protection. Weather-related issues such as those noted by the commenter should be addressed in the fugitive coal dust emissions control plan prepared by the owner/operator.

*Comment:* One commenter stated that the proposed requirements that the permitting authority approve the site-specific fugitive dust would be unnecessary. The better and less burdensome approach is to require owners or operators to submit their fugitive dust controls plans to the permitting authority, and those plans would automatically take effect unless the permitting authority objects to the terms of the plan. Another commenter stated that the proposed requirements do not specify which permitting authority will be required to approve fugitive dust emissions plans under the proposed regulation. It is entirely unclear, for instance, whether fugitive dust emissions plans will be required to be incorporated into a coal preparation plant's title V permit. EPA must clarify these requirements for the preparation and approval of the fugitive dust emissions control plans. At a minimum, the commenter stated that EPA must require that these fugitive dust emission control plans be subject to public notice and comment, whether or not they are incorporated into a plant's title V permit.

*Response:* The requirement to control fugitive coal dust emissions by operating according to a written fugitive dust emissions control plan is a Federal requirement and is Federally enforceable. The final rule does not require approval of the plans by the Administrator or delegated authority. In addition, the commenter does not identify any provision of CAA section 111 that would require the NSPS itself to establish a notice and comment process for the plans. However, this rule does require the owner/operator to submit the fugitive coal dust emissions control plan to the Administrator or delegated authority to provide an opportunity for the Administrator or delegated authority to object to the

fugitive coal dust emissions control plan. The final rule requires the owner/operator to submit the fugitive coal dust emissions control plan to the Administrator or delegated authority before startup of the new, reconstructed or modified facility. If an objection is raised, the owner/operator has 30 days from receipt of the objection to respond with a revised fugitive coal dust emissions control plan. The owner/operator must operate in accordance with the revised fugitive coal dust emissions control plan.

The requirement for the owner/operator to prepare and operate according to a submitted fugitive coal dust emissions control plan that is appropriate for site conditions must be included in the title V operating permit for the source. This and other requirements for title V permits are addressed in 40 CFR part 70.

Finally, to the extent the comment raises issues beyond the scope of the supplemental proposal, EPA has no obligation to respond in this rulemaking.

*Comment:* Three commenters noted that EPA's proposal requires submittal of the fugitive emissions control plan to the permitting authority 90 days prior to the compliance date. Commenters assumed this means the date for conducting the performance test under section 60.8, which is 60 days after reaching maximum production but not more than 180 days. If EPA finalizes its proposed approach and subjects existing units to fugitive emissions control plans, commenters requested guidance on how the 90-day requirement is applied with respect to the effective date of the final rule and the proposed April 2008 applicability date. The commenters explained that a modified open storage coal pile that is required to submit a fugitive dust plan may be required to comply with that requirement before the rule is effective and, therefore, could not meet the 90-day requirement.

*Response:* The commenter's statement that some open storage coal piles are required to comply before the rule is effective is not completely accurate. With respect to open storage piles, May 27, 2009, is the date used to determine which sources qualify as "new sources" as that term is defined in CAA section 111(a)(2). The rule requirements for open storage piles apply to any stationary open storage pile sources, the construction or modification of which is commenced after that date. The compliance obligation doesn't arise until the effective date of the revised NSPS rule. However, because CAA section 111(b)(1)(B) provides that

standards of performance or revisions thereof shall become effective upon promulgation, all sources that qualify as "new sources" must be constructed in accordance with the regulations. Further because both the requirement that new sources include sources constructed or modified after the date of the proposed regulations and the requirement that the standards become effective upon promulgation are statutory requirements, EPA does not have authority to alter these requirements. The specific situation raised by the commenters is no longer relevant because the final rule does not require approval of the fugitive coal dust emissions control plan.

#### *F. Testing and Monitoring Requirements*

*Comment:* Several commenters stated that the proposed requirements for subsequent PM emissions performance tests after the initial compliance test are either not needed or are too frequent. Commenters suggested that for most units, repeat PM performance testing should be required no more often than every five years. One commenter stated that once a source has established, based on an initial performance test, that a PM control device is properly sized and installed to meet the applicable PM limit, stack testing is not necessary to ensure continued compliance. Rather, compliance can be determined through visible observations using procedures like Method 22 or other operating parameters, like BLDS. Another commenter noted that if EPA ultimately adopts the BLDS requirement; it should recognize that facilities that use such devices are likely to operate in compliance with EPA's standards because deviations would be detected before any noncompliance occurs. According to the commenter, these facilities should, therefore, be exempt from ongoing opacity monitoring requirements, other than the initial and five-year performance tests.

*Response:* The emissions testing requirements for PM, SO<sub>2</sub>, NO<sub>x</sub>, and CO accomplish two goals. First, emissions measurements are necessary to directly determine compliance with the applicable emissions limit. Direct measurement will also provide data necessary to verify the accuracy of the annual compliance certifications. The data will also augment the data supporting the regional and national emissions factors and emissions inventories. Second, periodic performance testing will verify the calibration and representativeness of the continuous monitoring system (e.g., BLDS, scrubber pressure drop) and, as necessary, indicate that readjustment is

required. EPA does not believe that these goals can be met with emissions testing for each separate source on a 5-year cycle. EPA has, however, provided a provision that, for affected facilities that emit at 50 percent or less of the applicable standard, repeat performance testing is required every 24 months (as opposed to every 12 months). Also, for well-performing (emitting at 90 percent or less of the applicable standard) similar, separate sources using identical control equipment, the final rule allows a single repeat performance test as adequate demonstration for up to four other similar, separate sources. Under this provision, a performance test for each of these similar affected sources is required to be conducted at at least once every 5 years (*i.e.*, one similar source would be required to conduct repeat performance testing every 12 months).

*Comment:* Many commenters restated concerns raised in comments on the April 28, 2008, subpart Y amendment proposal about the accuracy and limitations of the Method 9 test method at levels below 10 percent opacity. As long as EPA continues to propose a subpart Y opacity limit of less than 10 percent, commenters contend that EPA must present compelling proof that an opacity standard below 10 percent can be accurately and reliably enforced by Method 9 observations.

*Response:* We disagree with the implication that measurements made with Method 9 for opacity levels less than 10 percent are inaccurate or not suitable for compliance determinations. Foremost, the data used to establish the applicable opacity limit for the rule were collected using Method 9 in a manner consistent with the directions in the method. It is also worth noting that the method provides no restrictions on the use of the method for applicable limits less than 10 percent opacity. The introduction to the method acknowledges the potential for measurement error in applying Method 9 and, in particular, the greater potential for negative bias than for positive bias if ambient contrasts between background and the emissions plume are less than ideal. In addition, we applied substantial allowance for measurement imprecision in establishing the limits. Thus, we believe that the relevant opacity limits established in the rule are reasonable and that Method 9 measurements may be used to determine compliance with those limits.

*Comment:* Several commenters supported EPA's proposal to allow the owner/operator of an affected facility to decrease the observation period for a Method 9 performance test from 3 hours

to 60 minutes, but suggested EPA consider a 30-minute test. EPA has provided no rationale for requiring a longer observation period in this NSPS than it is requiring under the 40 CFR part 60, subpart OOO, NSPS. One commenter questioned EPA's proposed provision that would allow the performance test observation time reduction only if all 6-minute average opacity readings are less than or equal to 3 percent and all the individual 15-second opacity observations are less than 20 percent during the initial 60 minutes. The commenter also noted that the accuracy of Method 9 readings below 5 percent is very questionable. The commenter believes that a 60-minute test is still unnecessarily long, given the number of emission points and the low expected variability. The commenter noted that when EPA finalized its NSPS for subpart OOO, it required only 30 minutes of Method 9 testing for compliance with the fugitive emissions standard in all cases (section 60.675(b)(3), 74 FR 19313, column 3).

*Response:* EPA continues to believe that a 60-minute observation period is reasonable and has decided that Method 9 opacity testing for a duration of 60 minutes should be required for all affected sources. However, an owner/operator may decrease the observation period for a Method 9 performance test from 60 minutes to 30 minutes if, during the initial 30 minutes of the performance test, all 6-minute averages are less than or equal to half the applicable opacity limit. This is a significant reduction from the standard 3-hour observation period for Method 9 performance tests. We disagree with the commenters' apparent assumption that subpart Y and subpart OOO are comparable and that the observation period should be the same in both rules. EPA believes that the Method 9 opacity testing observation period required by subpart Y is appropriate for coal preparation and processing operations.

*Comment:* Many commenters stated concerns about the need for and requirements for EPA's proposal to determine the frequency of repeat Method 9 performance testing for an affected source according to a schedule based on the "maximum 15-second opacity reading" during the most recent Method 9 performance test. According to commenters, that proposal would be incredibly burdensome and unnecessarily stringent for no discernible reason, and EPA provided insufficient justification for significantly increasing the frequency of monitoring. Specific reasons cited by commenters include:

■ Although it is certainly possible for a Method 9 reader to calculate opacities below 5 percent by averaging observations recorded at zero with those recorded at higher opacities (like 5 and 10 percent), the accuracy and precision of Method 9 readings at levels below 5 (even below 10 percent) are questionable at best. Under EPA's proposal, even a small bias in a single observation could make a facility ineligible for use of Method 22, or result in a requirement to repeat a performance test in 7 days, rather than 30 days. Although basing testing frequency and eligibility for alternatives on a source's margin of compliance may be a generally sound concept, EPA has not provided any basis for applying that concept to such small differences in opacity readings (*e.g.*, 3 versus 4 or 5 percent opacity), or to such low opacity levels.

■ EPA's proposal for determining the frequency of Method 9 testing would require extensive tracking, scheduling, and paperwork. Owners/operators would be required to track for each emission point (1) the alternative being used and the basis for eligibility, (2) the results of the required observation, and (3) the deadline for the next test.

■ For each new Method 9 performance test, the owner or operator would need to provide 30 days notice to the State or local regulatory authority and, for Method 9 tests that cannot be conducted on time due to weather conditions, provide notice of rescheduling and report a deviation from applicable testing requirements (potentially subjecting the facility to enforcement).

■ One commenter believes there are no cost savings by using consultants to come out and read Method 9 or Method 22 results. Because of mining regulations, a consultant would need to be accompanied by a certified coal miner, eliminating any cost reduction.

■ The administrative burden and costs imposed, to implement the proposal cannot be justified considering the availability of simpler and more effective options. As with repeat PM performance testing, if the goal is to ensure that controls are maintained and that sources are identified and take action promptly to investigate and correct the cause of any visible emissions, then the same result could be accomplished with a combination of equipment inspection and Method 22 readings.

■ EPA proposed to provide an exemption from the repeat Method 9 performance testing for thermal dryers that continuously monitor scrubber parameters, but only if Method 9

performance tests are conducted concurrently with each PM performance test. One commenter supported the exemption, but questioned why Method 9 performance tests should be required.

*Response:* The commenters are correct that the incentives to monitor less frequently provided to very well performing facilities will be predicated on demonstrations of very near zero visible emissions. Such conditions are consistent with findings made during the rule development that indicated that some facilities consistently reported no visible emissions. First, as previously explained, the final rule includes an opacity limit of less than 10 percent for coal handling facilities. The final rule includes a number of changes from the supplemental proposal's opacity testing and monitoring requirements. The final rule bases subsequent Method 9 opacity testing frequency on 6-minute average opacity readings from the most recent performance test. As an alternative to subsequent Method 9 opacity testing, the final rule provides an option that includes daily walkthrough observations consisting of a single 15-second observation (visible emissions or no visible emissions) of each affected facility and requires that corrective actions be conducted when any visible emissions are observed. If visible emissions are still observed after corrective actions have been conducted, a Method 9 performance test is required within 45 operating days. EPA agrees that the monitoring provisions of the final rule will increase the recordkeeping and reporting burden to implement the rule. EPA rules require documentation of any measurements and the associated process operating conditions and regulatory compliance requirements; however, we disagree that this rule imposes any additional record keeping or reporting burden specifically in order to provide for the reduced monitoring frequency allowances. The subject provisions do not change those generic requirements. It is also worth noting that the PM and opacity limits are two distinct and separate applicable requirements of this rule. Opacity is an independent applicable requirement that is not necessarily a surrogate of the PM emissions limit or vice versa. Further, there is no potential for enforcement action for a test delayed by weather or other unforeseen conditions (*see* section 60.8(d)).

*Comment:* Two commenters noted that EPA requested comment on whether requiring an annual average instantaneous opacity from 10 dumps is appropriate as an alternate to use of Method 22 for other affected facilities. The commenters clarified that the

control effectiveness is not an annual average and the State of Wyoming Department of Environmental Quality (WDEQ) uses the 10 truck dump approach to evaluate whether BACT is being continuously maintained at any given truck dump. They further explained that the 10-truck evaluation currently in use in Wyoming is not a compliance determination. Rather, if WDEQ finds the 10-truck opacity greater than 20 percent, corrective action is required to return the dump to BACT requirements. The commenters do not support a rule mandating how a permitting authority determines the control effectiveness of truck dumps nor the trigger levels proposed for other coal-handling equipment. The commenters supported including truck dumps as part of the fugitive emissions control plan. Commenters explained that approach would allow the permitting agency to tailor the alternate monitoring to fit their source and type of controls employed. Commenters stated that one option for alternative monitoring would be the control effectiveness test using the 20 percent opacity limit, as determined by taking the maximum instantaneous opacity of fugitive emissions observed from each truck dump activity, averaged for ten trucks or less as determined by the permitting authority. According to commenters, truck dumps are intermittent sources and typically will always show compliance using Method 9. Absent any other EPA methods for evaluating intermittent sources, the commenters support an opacity limit of no greater than 5 percent opacity.

Four commenters stated that EPA misinterpreted the WDEQ method for monitoring truck-dump facilities and expressed the following concerns with applying the WDEQ method for the purpose of determining compliance with some, as yet unknown, opacity standard.

■ The method is neither a Reference Method, nor an Equivalent Method, as defined by the Wyoming Air Quality Standards and Regulations. Furthermore, the existing opacity certification training protocol does not address the observation technique the State of Wyoming is using. The protocol defines a process to designate an appropriate averaging time for 15-second opacity readings taken during the part of the operation in which the largest amount of emissions are expected to occur.

■ An opacity limit based solely on the small amount of time that the truck is dumping should not be comparable to a opacity limit on a continuous point source such as a stack. Opacity read

only while the truck is dumping, inappropriately skews the results to read the worse-case scenario and doesn't take into account the time when the emissions are non-existent due to the non-continuous nature of the source.

■ Commenters recommended a better and more reasonable approach to monitoring truck-dump facilities. An initial compliance test using the visual observation protocol provided in Method 9. Compliance with the 15 percent opacity standard would be determined by averaging the 15-second opacity readings made during the duration of three separate truck dump events. Each test would commence when the truck bed begins to elevate and conclude when the truck bed returns to a horizontal position. This would provide a reasonable evaluation of opacity during the actual dumping event, as opposed to the Method 9 protocol that would allow for observations long after the dumping event terminates. Thereafter, an owner/operator would conduct quarterly Method 9 compliance tests consistent with the above three truck-dump protocol. Owners/operators would supplement their quarterly Method 9 compliance testing with monthly visual observations of the physical appearance of the equipment and the requirement to repair any deficiencies found.

One commenter stated that the current standard utilized in Wyoming (6-minute Method 9 readings) has been criticized in the past, but it may be the most representative approach for non-continuous or sporadic emissions sources. The commenter explained that, typically, the 6-minute Method 9 readings have been taken quarterly. The time between truck dumps are times of zero potential emissions from the truck dump control system. According to the commenter, in some ways the 6-minute Method 9 reading is very appropriate because it reflects most activities: the dumping, the coal passing through the hopper, and the periods of time when no activity is occurring. The commenter believes that it is important to adopt an opacity standard that is associated with the methodology as required by Method 9 procedures. The commenter further stated that if EPA wants to modify the existing requirement on truck dumps for Wyoming, an appropriate requirement would be to utilize the 6-minute Method 9 and set the opacity standard at greater than 10 percent. The commenter believes that the standard would likely be appropriate for a variety of truck types (*i.e.* rear and belly dump) and control systems (*i.e.* stilling sheds, baghouses, and water spray bars). Two commenters stated that until the

necessary foundation for possible NSPS regulation can be established for coal unloading, any revision to subpart Y must expressly withdraw the Agency's interpretation of the late-1990s that subpart Y applies to coal unloading at coal preparation and processing plants.

*Response:* EPA continues to believe it is appropriate to require coal truck dump operations to be subject to the same opacity limit as other coal-handling facilities. Data indicate that the various control measures currently used on truck dump operations are capable of meeting the final rule's opacity limit of less than 10 percent. However, due to the intermittent frequency of coal dumping, EPA has determined that it is inappropriate to require the same testing and monitoring of opacity emissions from coal truck dumps as are required for other affected coal-handling facilities subject to opacity limits. The variability in the number of coal trucks during any given period is likely to render Method 9 opacity testing over a 60-minute period meaningless. EPA disagrees with commenters who believe that opacity read only while the truck is dumping, inappropriately skews the results to read the worse-case scenario because it doesn't take into account the time when the emissions are non-existent due to the non-continuous nature of this truck dump operations. In fact, EPA believes that opacity measurements taken during truck dumping is the appropriate time to conduct Method 9 opacity testing. We agree with other commenters who believe that this approach would provide a reasonable evaluation of opacity during the actual dumping event, as opposed to Method 9 protocol that would allow for observations long after the dumping event terminates. In the supplemental proposal, EPA requested comment on whether requiring an annual average instantaneous opacity from 10 truck dumps is appropriate as an alternate to monitoring required for other affected facilities. After considering the public comments, we have decided to include in the final rule an approach to monitoring truck dump operations that was suggested by a commenter. Owners/operators of all affected facilities would be required to conduct an initial compliance test using Method 9. Compliance with the less than 10 percent opacity standard will be determined by averaging the 15-second opacity readings made during the duration of three separate truck dump events. A truck dump event begins when the truck bed begins to elevate and concludes when the truck bed

returns to a horizontal position. The final rule also requires monthly visual observations of the equipment and expeditious maintenance if any deficiencies are observed. Finally, subsequent Method 9 opacity testing using the three-truck dump procedure is required every 90 days.

#### *G. Recordkeeping and Reporting Requirements*

*Comment:* Two commenters stated that they did not object to the proposed reporting requirement for affected owners/operators to be able to enter data from their performance evaluations conducted at their plants to demonstrate compliance with the applicable subpart Y standards electronically into an EPA database (identified as WebFIRE). Numerous other commenters specifically objected to the electronic reporting requirement. Commenters' cite various reasons for opposing the requirement, including (1) the unnecessary burden of electronically reporting test results; (2) uncertainty regarding whether the proposed reporting requirement meets the requirements of the Cross-Media Electronic Reporting Rule (CROMERR), which is codified at 40 CFR Part 3; (3) the lack of sufficient justification for requiring that data be reported electronically, rather than merely standardizing where results are sent and in what form; (4) the lack of any mechanism for sources to confirm the authenticity of data submitted to the Web site for their facility by a stack testing company; (5) the inability of ERT to accept opacity data or continuous monitoring system (CMS) data; and (6) the finalizing of a regulatory requirement based on an "expectation" of WebFIRE and the ERT being operational in early 2011 and of the ERT being CROMERR compliant before 2011 (EPA-HQ-OAR-2005-0031-0284, p. 9). The commenters stated that EPA should proceed with its plans for development of WebFIRE/ERT and allow sources the option to report electronically with those tools when they become available. If WebFIRE does become available in the future and EPA still believes that mandatory electronic reporting through WebFIRE is appropriate, EPA can re-propose the requirement. However, in the meantime, commenters contend that EPA must provide sources the option of continuing to submit reports by mail after 2011, just as EPA did in 40 CFR Part 60, subpart Da (section 60.49Da(v)(4), 74 FR 5072 and 5083, January 28, 2009). Other commenters stated that EPA should develop an electronic data exchange with the State/local/Tribal agencies to get the

necessary performance test data. Another commenter stated that by collecting data under CAA section 111, rather than CAA section 114, EPA is overstepping its authority.

*Response:* The commenters are correct that the Agency does not intend to store visible emissions or CMS operating data used for compliance on WebFIRE. Source owners and testers need not submit visible emissions or CMS data to WebFIRE or any other national database. The source owners must address only those data reporting and record keeping requirements relevant to compliance determinations and certifications (e.g., operating permitting requirements). In this rule, EPA intends that owners/operators submit to WebFIRE pollutant emissions data, particularly those data from performance tests for PM or other pollutants. The purpose of WebFIRE is to be the vehicle for making such data available for use in establishing the most representative emissions factors for use in developing effective national and regional emissions inventories and other purposes. With this provision, the Agency is exercising the authority provided under CAA section 114(a)(1) to have sources collect and submit environmental data needed to implement the CAA.

#### *H. Assessment of Impacts*

*Comment:* One commenter stated that the supplemental proposal continues the same inadequate approach to consideration of the costs and environmental, energy, and economic impacts of amendments to the subpart Y NSPS. The commenter noted that even though the supplemental proposal greatly expanded the coverage of the subpart Y NSPS, both in terms of operations covered and in terms of pollutants regulated, EPA asserted that it will not increase control costs or recordkeeping and reporting costs above those of the April 2008 proposal. The commenter believes that EPA should evaluate the costs and emission reduction benefits of the proposed standards. The commenter explained that because of the definitions of "modification" and "reconstruction" as applied to NSPS, a coal preparation plant at a cement manufacturing facility may be considered "modified" or "reconstructed," and therefore subject to the amended subpart Y, even when the activity that constitutes a "modification" or "reconstruction" results in little or no increase in actual emissions.

*Response:* EPA has assessed the costs, environmental, energy, and economic impacts associated with the requirements of the final rule. Control

costs, testing and monitoring costs, and recordkeeping and reporting costs have been estimated for each coal preparation and processing operation anticipated to become subject to requirements of the final rule. As previously explained in this preamble, in-line coal mills at Portland cement manufacturing plants are not regulated by subpart Y. Impacts for coal-handling operations that would be regulated by subpart Y and are located at a Portland cement manufacturing plant have been estimated.

*Comment:* Several comments were received regarding EPA's approach to analyzing the information collection request (ICR) burden of affected owners/operators that would result from the implementation of subpart Y amendments in the supplemental proposal notice. Commenters stated that EPA has grossly underestimated the annual monitoring, reporting, and recordkeeping burden for the effort of the increased monitoring and opacity performance testing for specified affected facilities. The commenters noted that the existing ICR estimates do not take into account the significant additional monitoring requirements contained in the proposed amendments. Commenters believe that EPA's approach to analyzing the ICR burdens associated with the rulemaking is inconsistent with the directives of the Paperwork Reduction Act, and fails to address the actual burdens that will result from the amendments proposed in the supplemental action. Commenters requested that EPA prepare a new ICR that accurately projects the burden associated with the most recently proposed requirements for monitoring, recordkeeping and reporting.

*Response:* EPA prepared and submitted a revised ICR to the Office of Management and Budget (OMB). The revised ICR addresses all revisions to the subpart Y NSPS made in the final rule—both those proposed in the April 28, 2008, proposal and those proposed in the May 27, 2009, supplemental proposal.

## V. Summary of Cost, Environmental, Energy, and Economic Impacts

In setting standards, the CAA requires EPA to consider costs and environmental, energy, and economic impacts. Those impacts are expressed as incremental differences between the impacts of coal preparation and processing facilities complying with the amendments and the current NSPS requirements of subpart Y (*i.e.*, baseline). Impacts are presented for coal preparation and processing plants for which construction, modification, or

reconstruction is expected to commence over the 5 years following promulgation of the revised NSPS. EPA estimates that 22 new coal preparation and processing plants will comply with subpart Y in the next 5 years. These new plants are anticipated to consist of coal-handling operations (coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems) and will be built at 2 bituminous mines, 2 subbituminous mines, 1 coke production facility, 6 utility plants, 10 cement manufacturing plants, and 1 industrial site.

Conservative assumptions were used in assessing impacts associated with the 22 new plants. For example, emissions from all affected facilities are assumed to be collected and vented through a fabric filter, whereas, owners/operators may opt to use another suitable and less costly control measure. Because a new thermal dryer has not been installed at a bituminous coal mine in the past decade, EPA does not anticipate there will be any new thermal dryers in the next 5 years. Thermal dryers are not, therefore, included in the assessment of economic impacts resulting from the amendments to subpart Y. Nonetheless, we have estimated costs and environmental and energy impacts for 4 model thermal dryers that would result from the amended NSPS in the unlikely event that a new thermal dryer is constructed. Two of the model thermal dryers are direct contact, pulverized bituminous coal-fired dryers (with coal sulfur contents of 1.5 percent and 3.0 percent) at two bituminous mines; one is a natural gas-fired recirculating dryer at an industrial facility; and one is a waste heat-fired indirect dryer at an electric utility power plant. *See* Docket ID No. EPA-HQ-OAR-2008-0260 for details regarding the impacts analyses.

### A. What Are the Primary Air Impacts?

EPA estimated PM emissions reductions for coal-handling operations at each type of model coal preparation and processing plant (*i.e.*, at bituminous mines, subbituminous mines, coke production facilities, utility plants, cement manufacturing plants, and industrial sites). We then determined approximate nationwide PM emissions reductions associated with the projected 22 new coal preparation and processing plants by distributing the new plants by site type (*e.g.*, 2 plants at bituminous mines, 2 plants at subbituminous mines, *etc.*). Nationwide PM emissions reduction is estimated to be approximately 7,600 tpy. We also estimated PM, SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions reductions for each model thermal dryer to demonstrate the

pollutant reductions that the NSPS would achieve if a new thermal dryer were built. PM emission reductions are estimated to range from approximately 90 tpy to 14,214 tpy, with the greatest PM reduction coming from the model indirect dryer which, until promulgation of these amendments, has not been subject to subpart Y. SO<sub>2</sub> emission reductions from the model direct contact thermal dryers are estimated to range from 526 tpy to 1,054 tpy, based on coal sulfur contents of 1.5 percent and 3.0 percent, respectively. The estimated NO<sub>x</sub> emission reductions of 108 tpy and CO emissions reductions of 19 tpy are the same for both model direct contact thermal dryers. Neither natural gas-fired recirculating dryers nor waste heat-fired indirect dryers are subject to the SO<sub>2</sub>, NO<sub>x</sub>, or CO emission limits.

### B. What Are the Water and Solid Waste Impacts?

EPA estimates that for the 22 coal preparation and processing plants projected to be built, approximately 7,600 tpy of additional solid waste will be generated as a result of operating systems that collect and vent exhaust gases through a fabric filter. There will be no waste water impacts. While EPA believes it is unlikely that any new thermal dryers will be constructed in the next 5 years, we estimate that 30 million-gallons per year of waste water would be generated by each of the model thermal dryers using venturi scrubbers. The solid waste that would be generated by the model thermal dryers using fabric filters is estimated to range from 323 tpy to 14,365 tpy.

### C. What Are the Energy Impacts?

EPA estimates that approximately 11,800 megawatt-hours per year (MWh/year) of additional electricity will be required to support the collection of, and venting through a fabric filter, exhaust gases from the 22 new coal preparation and processing plants that are projected to be constructed. While EPA believes it is unlikely that any new thermal dryers will be constructed in the next 5 years, we estimate that 23 MWh/year to 4,200 MWh/year of additional electricity would be required by the control technologies associated with the four model thermal dryers.

### D. What Are the Secondary Air Impacts?

Secondary air impacts are direct impacts that result from the increase in electricity use that we estimate may be required to enable facilities to achieve the requirements of a rule. We estimate that the rule's requirements could result in emissions of 1 tpy of PM, 8 tpy of

SO<sub>2</sub>, 5 tpy of NO<sub>x</sub>, and 1 tpy of CO from the increased electricity useage by the 22 new coal preparation and processing plants that are projected to be constructed. While EPA believes it is unlikely that any new thermal dryers will be constructed in the next 5 years, we estimate that the rule's requirements for thermal dryers could result in emissions of 4 to 680 pounds per year (lb/yr) of PM, 40 to 5,880 lb/yr of SO<sub>2</sub>, 20 to 3,780 lb/yr of NO<sub>x</sub>, and 4 to 840 lb/yr of CO from the increased electricity usage by the four model thermal dryers.

#### *E. What Are the Cost and Economic Impacts?*

EPA estimates that the national total costs for the 22 new coal preparation and processing plants projected to be constructed to comply with requirements of the final rule would be approximately \$7.9 million in each of the first 5 years of compliance. This estimate includes the costs of control technology, testing, monitoring, and recordkeeping and reporting. EPA assessed the economic impacts of the amendments to the NSPS for coal preparation and processing plants. An economic impact analysis focuses on changes in market prices and output levels. Both the magnitude of control costs needed to comply with the final rule and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to the rule. The costs to comply with the final rule on a facility basis are all projected to be less than one percent of sales. These small costs are not expected to result in a significant market impact whether they are passed on to the purchaser or absorbed.

While EPA believes it is unlikely that any new thermal dryers will be constructed, these amendments will protect the public health and environment by assuring that appropriate controls will be installed on future new thermal dryers should any be built. We estimate that the total costs for the model thermal dryers to comply with requirements of the final rule could range from \$133,000 per year to \$1.54 million per year, with the highest total cost representing a direct contact model thermal dryer using coal with a higher sulfur content (*i.e.*, 3 percent) and that would be subject to PM, SO<sub>2</sub>, NO<sub>x</sub>, and CO emission limits.

The majority of States that have requirements beyond the NSPS already require controls and work practice standards for coal preparation and processing plant operations. In addition, any coal preparation and processing

plant that is subject to NSR would have control requirements significantly more stringent than those of the 1976 NSPS. Thus, a benefit of the amendments to subpart Y will be that affected facilities located in States that do not require controls beyond the existing NSPS will be required to comply with emission standards based on current BDT for coal preparation and processing plants.

#### **VI. Statutory and Executive Order Reviews**

##### *A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it may raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the EO. Accordingly, EPA submitted this action to the OMB for review under EO 12866, and any changes made in response to OMB recommendations have been documented in the docket for this action.

##### *B. Paperwork Reduction Act*

The information collection requirements in this rule have been submitted for approval to the OMB under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* The information collection requirements are not enforceable until OMB approves them.

The amendments to the existing standards of performance for coal preparation and processing plants add new monitoring, reporting, and recordkeeping requirements. All affected facilities constructed, reconstructed, or modified on or after April 28, 2008, are required to conduct initial performance testing. The amendments include a reduction in Method 9 test duration, and for subsequent Method 9 testing, a provision allowing simultaneous Method 9 testing for up to three emission points. Frequency of subsequent Method 9 testing is based on performance during the most recent test (*i.e.*, subsequent testing is required within 90 days or 12 months of previous test). The amendments also provide an alternative to more frequent subsequent Method 9 testing that consists of monthly visual observations of process and control equipment, daily 15-second observations of each affected facility with a requirement to conduct corrective actions if any visible emissions are observed, and Method 9 testing at least once every 5 years. Separate testing and monitoring requirements are provided for coal truck

dump operations. Owners/operators of open storage coal piles constructed on or after May 27, 2009, are required to prepare, and operate in accordance with, a fugitive dust emissions control plan that addresses the types of control measures that will be used to minimize fugitive coal dust emissions from the source's open storage piles. The information generated by the requirements described above will be used by EPA to ensure that any new affected facilities comply with the emission limits and other requirements. Records and reports are necessary to enable EPA or States to identify new affected facilities that may not be in compliance with the requirements. Based on reported information, EPA will decide which units and what records or processes should be inspected. The amendments do not require any notifications or reports beyond those required by the General Provisions. The recordkeeping requirements require only the specific information needed to determine compliance. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to EPA for which a claim of confidentiality is made will be safeguarded according to EPA policies in 40 CFR Part 2, subpart B, Confidentiality of Business Information.

The nationwide monitoring, reporting, and recordkeeping burden for this collection over the first 3 years of this ICR is estimated to total 27,578 labor-hours at a cost of \$2,601,624. The nationwide 3-year average burden is estimated to be 9,193 labor-hours per year and \$867,208 per year. Based on 14 respondents, the average burden hours per respondent are estimated to be 657 hours at an estimated cost of \$61,943 per respondent. Over the first 3 years of this ICR, the annualized total capital and start-up costs are estimated to be \$674,528 and the total operation and maintenance costs are estimated to be \$1,151,690. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. EPA displays OMB control numbers various ways. For example, EPA lists OMB control numbers for EPA's regulations in 40 CFR Part 9, which we amend periodically. Additionally, we may display the OMB control number in another part of the CFR, or in a valid **Federal Register** notice, or by other appropriate means. The OMB control number display will become effective

the earliest of any of the methods authorized in 40 CFR Part 9.

When this ICR is approved by OMB, the Agency will publish a **Federal Register** notice announcing this approval and displaying the OMB control number for the approved information collection requirements contained in this final rule. We will also publish a technical amendment to 40 CFR part 9 in the **Federal Register** to consolidate the display of the OMB control number with other approved information collection requirements.

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of these final amendments to 40 CFR part 60, subpart Y, on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities. We are not aware of any small entities in the coal preparation and processing regulated industry. The subpart Y standards are applicable to facilities that process (*i.e.*, break, crush, screen, clean, or dry) more than 181 Mg (200 tons) of coal per day.

### D. Unfunded Mandates Reform Act

This final rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any one year. The total annual control, testing and monitoring, and recordkeeping and reporting costs of the final rule at year five is \$7.9 million.

Thus, this final rule is not subject to the requirements of sections 202 or 205 of UMRA.

This final rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. We are not aware of any coal preparation and processing plants owned by small governments.

### E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in EO 13132. These final amendments will not impose substantial direct compliance costs on State or local governments and will not preempt State law. Thus, EO 13132 does not apply to this action.

### F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This final action does not have Tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). We are not aware of any coal preparation and processing facilities owned by an Indian Tribe. Thus, Executive Order 13175 does not apply to this action.

### G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the EO has the potential to influence the regulation. This final action is not subject to EO 13045 because it is based solely on technology performance.

### H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This final action is not a "significant energy action" as defined in EO 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. EPA estimates that the requirements in this final action will cause most coal preparation and processing operations that become subject to subpart Y to install new control devices, resulting in approximately 12,400 megawatt-hours per year of additional electricity being

used. Given the negligible change in energy consumption resulting from this action, EPA does not expect significant adverse energy effects. Further, we have concluded that this final rule is not likely to have any adverse energy effects because

### I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113 (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

This final rulemaking involves technical standards. EPA has decided to use ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," for its manual methods of measuring the oxygen, carbon dioxide, sulfur dioxide or nitrogen dioxide content of the exhaust gas. These parts of ASME PTC 19.10-1981 are acceptable alternatives to EPA Method 3B of appendix A-2 and EPA Methods 6, 6A, and 7 of appendix A-4 of 40 CFR Part 60. This standard is available from the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990.

EPA also has decided to use EPA Methods 1, 1A, 2, 2A, 2C, 2D, 2F, 2G, 3, 3A, 3B, 4, 5, 5B, 5D, 6, 6A, 6C, 7, 7E, 9, 10, 17, and 22 (40 CFR part 60, appendices A-1 through A-7). While the Agency has identified 20 VCS as being potentially applicable, we do not propose to use these standards in this final rulemaking. The use of these VCS would be impractical because they do not meet the objectives of the standards cited in this final rule. See the docket of this final rule for the reasons for these determinations on the standards.

### J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes Federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practical and permitted by law, to make



environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high adverse human health or environmental effects on any populations, including any minority or low-income population. The final rule will assure that all new coal preparation and processing plants install appropriate controls to limit health impacts to nearby populations.

#### K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This final rule will be effective October 8, 2009.

#### List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: September 25, 2009.

**Lisa P. Jackson**,  
Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 60, of the Code of Federal Regulations is amended as follows:

#### PART 60—[AMENDED]

■ 1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

#### Subpart A—[Amended]

- 2. Section 60.17 is amended:
  - a. By revising paragraph (a)(13);
  - b. By removing paragraph (a)(14);
  - c. By redesignating paragraphs (a)(15) through (a)(93) as paragraphs (a)(14) through (a)(92); and
  - d. By revising paragraph (h)(4) to read as follows.

#### § 60.17 Incorporations by Reference.

\* \* \* \* \*

(a) \* \* \*

(13) ASTM D388–77, 90, 91, 95, 98a, 99 (Reapproved 2004)<sup>e1</sup>, Standard Specification for Classification of Coals by Rank, IBR approved for §§ 60.24(h)(8), 60.41 of subpart D of this part, 60.45(f)(4)(i), 60.45(f)(4)(ii), 60.45(f)(4)(vi), 60.41Da of subpart Da of this part, 60.41b of subpart Db of this part, 60.41c of subpart Dc of this part, 60.251 of subpart Y of this part, and 60.4102.

\* \* \* \* \*

(h) \* \* \*

(4) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [part 10, Instruments and Apparatus], IBR approved for § 60.106(e)(2) of subpart J, §§ 60.104a(d)(3), (d)(5), (d)(6), (h)(3), (h)(4), (h)(5), (i)(3), (i)(4), (i)(5), (j)(3), and (j)(4), 60.105a(d)(4), (f)(2), (f)(4), (g)(2), and (g)(4), 60.106a(a)(1)(iii), (a)(2)(iii), (a)(2)(v), (a)(2)(viii), (a)(3)(ii), and (a)(3)(v), and 60.107a(a)(1)(ii), (a)(1)(iv), (a)(2)(ii), (c)(2), (c)(4), and (d)(2) of subpart Ja, § 60.257(b)(3) of subpart Y, tables 1 and 3 of subpart EEEE, tables 2 and 4 of subpart FFFF, table 2 of subpart JJJJ, and §§ 60.4415(a)(2) and 60.4415(a)(3) of subpart KKKK of this part.

\* \* \* \* \*

#### Subpart Y—[Amended]

- 3. Part 60 is amended by revising subpart Y to read as follows:  
Sec.

#### Subpart Y—Standards of Performance for Coal Preparation and Processing Plants

- 60.250 Applicability and designation of affected facility.
- 60.251 Definitions.
- 60.252 Standards for thermal dryers.
- 60.253 Standards for pneumatic coal-cleaning equipment.
- 60.254 Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.
- 60.255 Performance tests and other compliance requirements.
- 60.256 Continuous monitoring requirements.
- 60.257 Test methods and procedures.

60.258 Reporting and recordkeeping.

#### Subpart Y—Standards of Performance for Coal Preparation and Processing Plants

##### § 60.250 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to affected facilities in coal preparation and processing plants that process more than 181 megagrams (Mg) (200 tons) of coal per day.

(b) The provisions in § 60.251, § 60.252(a), § 60.253(a), § 60.254(a), § 60.255(a), and § 60.256(a) of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems.

(c) The provisions in § 60.251, § 60.252(b)(1) and (c), § 60.253(b), § 60.254(b), § 60.255(b) through (h), § 60.256(b) and (c), § 60.257, and § 60.258 of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after April 28, 2008, and on or before May 27, 2009: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems.

(d) The provisions in § 60.251, § 60.252(b)(1) through (3), and (c), § 60.253(b), § 60.254(b) and (c), § 60.255(b) through (h), § 60.256(b) and (c), § 60.257, and § 60.258 of this subpart are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after May 27, 2009: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, transfer and loading systems, and open storage piles.

##### § 60.251 Definitions.

As used in this subpart, all terms not defined herein have the meaning given them in the Clean Air Act (Act) and in subpart A of this part.

(a) *Anthracite* means coal that is classified as anthracite according to the American Society of Testing and Materials in ASTM D388 (incorporated by reference, *see* § 60.17).



(b) *Bag leak detection system* means a system that is capable of continuously monitoring relative particulate matter (dust loadings) in the exhaust of a fabric filter to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

(c) *Bituminous coal* means solid fossil fuel classified as bituminous coal by ASTM D388 (incorporated by reference—see § 60.17).

(d) *Coal* means:

(1) For units constructed, reconstructed, or modified on or before May 27, 2009, all solid fossil fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM D388 (incorporated by reference—see § 60.17).

(2) For units constructed, reconstructed, or modified after May 27, 2009, all solid fossil fuels classified as anthracite, bituminous, subbituminous, or lignite by ASTM D388 (incorporated by reference—see § 60.17), and coal refuse.

(e) *Coal preparation and processing plant* means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(f) *Coal processing and conveying equipment* means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts. Equipment located at the mine face is not considered to be part of the coal preparation and processing plant.

(g) *Coal refuse* means waste products of coal mining, physical coal cleaning, and coal preparation operations (e.g. culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material.

(h) *Coal storage system* means any facility used to store coal except for open storage piles.

(i) *Design controlled potential PM emissions rate* means the theoretical particulate matter (PM) emissions (Mg) that would result from the operation of a control device at its design emissions rate (grams per dry standard cubic meter (g/dscm)), multiplied by the maximum design flow rate (dry standard cubic meter per minute (dscm/min)), multiplied by 60 (minutes per hour (min/hr)), multiplied by 8,760 (hours

per year (hr/yr)), divided by 1,000,000 (megagrams per gram (Mg/g)).

(j) *Indirect thermal dryer* means a thermal dryer that reduces the moisture content of coal through indirect heating of the coal through contact with a heat transfer medium. If the source of heat (the source of combustion or furnace) is subject to another subpart of this part, then the furnace and the associated emissions are not part of the affected facility. However, if the source of heat is not subject to another subpart of this part, then the furnace and the associated emissions are part of the affected facility.

(k) *Lignite* means coal that is classified as lignite A or B according to the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17).

(l) *Mechanical vent* means any vent that uses a powered mechanical drive (machine) to induce air flow.

(m) *Open storage pile* means any facility, including storage area, that is not enclosed that is used to store coal, including the equipment used in the loading, unloading, and conveying operations of the facility.

(n) *Operating day* means a 24-hour period between 12 midnight and the following midnight during which coal is prepared or processed at any time by the affected facility. It is not necessary that coal be prepared or processed the entire 24-hour period.

(o) *Pneumatic coal-cleaning equipment* means:

(1) For units constructed, reconstructed, or modified on or before May 27, 2009, any facility which classifies bituminous coal by size or separates bituminous coal from refuse by application of air stream(s).

(2) For units constructed, reconstructed, or modified after May 27, 2009, any facility which classifies coal by size or separates coal from refuse by application of air stream(s).

(p) *Potential combustion concentration* means the theoretical emissions (nanograms per joule (ng/J) or pounds per million British thermal units (lb/MMBtu) heat input) that would result from combustion of a fuel in an uncleaned state without emission control systems, as determined using Method 19 of appendix A-7 of this part.

(q) *Subbituminous coal* means coal that is classified as subbituminous A, B, or C according to the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see § 60.17).

(r) *Thermal dryer* means:

(1) For units constructed, reconstructed, or modified on or before May 27, 2009, any facility in which the moisture content of bituminous coal is

reduced by contact with a heated gas stream which is exhausted to the atmosphere.

(2) For units constructed, reconstructed, or modified after May 27, 2009, any facility in which the moisture content of coal is reduced by either contact with a heated gas stream which is exhausted to the atmosphere or through indirect heating of the coal through contact with a heated heat transfer medium.

(s) *Transfer and loading system* means any facility used to transfer and load coal for shipment.

#### § 60.252 Standards for thermal dryers.

(a) On and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of a thermal dryer constructed, reconstructed, or modified on or before April 28, 2008, subject to the provisions of this subpart must meet the requirements in paragraphs (a)(1) and (a)(2) of this section.

(1) The owner or operator shall not cause to be discharged into the atmosphere from the thermal dryer any gases which contain PM in excess of 0.070 g/dscm (0.031 grains per dry standard cubic feet (gr/dscf)); and

(2) The owner or operator shall not cause to be discharged into the atmosphere from the thermal dryer any gases which exhibit 20 percent opacity or greater.

(b) Except as provided in paragraph (c) of this section, on and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of a thermal dryer constructed, reconstructed, or modified after April 28, 2008, subject to the provisions of this subpart must meet the applicable standards for PM and opacity, as specified in paragraph (b)(1) of this section. In addition, and except as provided in paragraph (c) of this section, on and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of a thermal dryer constructed, reconstructed, or modified after May 29, 2009, subject to the provisions of this subpart must also meet the applicable standards for sulfur dioxide (SO<sub>2</sub>), and combined nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) as specified in paragraphs (b)(2) and (b)(3) of this section.

(1) The owner or operator must meet the requirements for PM emissions in paragraphs (b)(1)(i) through (iii) of this section, as applicable to the affected facility.

(i) For each thermal dryer constructed or reconstructed after April 28, 2008, the owner or operator must meet the requirements of (b)(1)(i)(A) and (b)(1)(i)(B).

(A) The owner or operator must not cause to be discharged into the atmosphere from the thermal dryer any gases that contain PM in excess of 0.023 g/dscm (0.010 grains per dry standard cubic feet (gr/dscf)); and

(B) The owner or operator must not cause to be discharged into the atmosphere from the thermal dryer any gases that exhibit 10 percent opacity or greater.

(ii) For each thermal dryer modified after April 28, 2008, the owner or operator must meet the requirements of paragraphs (b)(1)(ii)(A) and (b)(1)(ii)(B) of this section.

(A) The owner or operator must not cause to be discharged to the atmosphere from the affected facility any gases which contain PM in excess of 0.070 g/dscm (0.031 gr/dscf); and

(B) The owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 20 percent opacity or greater.

(2) Except as provided in paragraph (b)(2)(iii) of this section, for each thermal dryer constructed, reconstructed, or modified after May 27, 2009, the owner or operator must meet the requirements for SO<sub>2</sub> emissions in either paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) The owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 85 ng/J (0.20 lb/MMBtu) heat input; or

(ii) The owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases that either contain SO<sub>2</sub> in excess of 520 ng/J (1.20 lb/MMBtu) heat input or contain SO<sub>2</sub> in excess of 10 percent of the potential combustion concentration (*i.e.*, the facility must achieve at least a 90 percent reduction of the potential combustion concentration and may not exceed a maximum emissions rate of 1.2 lb/MMBtu (520 ng/J)).

(iii) Thermal dryers that receive all of their thermal input from a source other than coal or residual oil, that receive all of their thermal input from a source subject to an SO<sub>2</sub> limit under another subpart of this part, or that use waste heat or residual from the combustion of coal or residual oil as their only thermal input are not subject to the SO<sub>2</sub> limits of this section.

(3) Except as provided in paragraph (b)(3)(iii) of this section, the owner or

operator must meet the requirements for combined NO<sub>x</sub> and CO emissions in paragraph (b)(3)(i) or (b)(3)(ii) of this section, as applicable to the affected facility.

(i) For each thermal dryer constructed after May 27, 2009, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which contain a combined concentration of NO<sub>x</sub> and CO in excess of 280 ng/J (0.65 lb/MMBtu) heat input.

(ii) For each thermal dryer reconstructed or modified after May 27, 2009, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which contain combined concentration of NO<sub>x</sub> and CO in excess of 430 ng/J (1.0 lb/MMBtu) heat input.

(iii) Thermal dryers that receive all of their thermal input from a source other than coal or residual oil, that receive all of their thermal input from a source subject to a NO<sub>x</sub> limit and/or CO limit under another subpart of this part, or that use waste heat or residual from the combustion of coal or residual oil as their only thermal input, are not subject to the combined NO<sub>x</sub> and CO limits of this section.

(c) Thermal dryers receiving all of their thermal input from an affected facility covered under another 40 CFR Part 60 subpart must meet the applicable requirements in that subpart but are not subject to the requirements in this subpart.

#### **§ 60.253 Standards for pneumatic coal-cleaning equipment.**

(a) On and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of pneumatic coal-cleaning equipment constructed, reconstructed, or modified on or before April 28, 2008, must meet the requirements of paragraphs (a)(1) and (a)(2) of this section.

(1) The owner or operator must not cause to be discharged into the atmosphere from the pneumatic coal-cleaning equipment any gases that contain PM in excess of 0.040 g/dscm (0.017 gr/dscf); and

(2) The owner or operator must not cause to be discharged into the atmosphere from the pneumatic coal-cleaning equipment any gases that exhibit 10 percent opacity or greater.

(b) On and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of pneumatic coal-cleaning equipment constructed, reconstructed,

or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) and (b)(2) of this section.

(1) The owner or operator must not cause to be discharged into the atmosphere from the pneumatic coal-cleaning equipment any gases that contain PM in excess of 0.023 g/dscm (0.010 gr/dscf); and

(2) The owner or operator must not cause to be discharged into the atmosphere from the pneumatic coal-cleaning equipment any gases that exhibit greater than 5 percent opacity.

#### **§ 60.254 Standards for coal processing and conveying equipment, coal storage systems, transfer and loading systems, and open storage piles.**

(a) On and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.

(b) On and after the date on which the performance test is conducted or required to be completed under § 60.8, whichever date comes first, an owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in paragraphs (b)(1) through (3) of this section, as applicable to the affected facility.

(1) Except as provided in paragraph (b)(3) of this section, the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

(2) The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

(3) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of paragraph (b)(1) of this section.

(c) The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in

accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in paragraphs (c)(1) through (6) of this section.

(1) The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile.

(2) For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of paragraph (c)(6) of this section are met), use of a wind barrier, compaction, or use of a vegetative cover. The owner or operator must select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source.

(3) Any owner or operator of an affected facility that is required to have a fugitive coal dust emissions control plan may petition the Administrator to approve, for inclusion in the plan for the affected facility, alternative control measures other than those specified in paragraph (c)(2) of this section as specified in paragraphs (c)(3)(i) through (iv) of this section.

(i) The petition must include a description of the alternative control measures, a copy of the fugitive coal dust emissions control plan for the affected facility that includes the alternative control measures, and information sufficient for EPA to evaluate the demonstrations required by paragraph (c)(3)(ii) of this section.

(ii) The owner or operator must either demonstrate that the fugitive coal dust emissions control plan that includes the alternate control measures will provide equivalent overall environmental protection or demonstrate that it is either economically or technically infeasible for the affected facility to use the control measures specifically identified in paragraph (c)(2).

(iii) While the petition is pending, the owner or operator must comply with the fugitive coal dust emissions control plan including the alternative control

measures submitted with the petition. Operation in accordance with the plan submitted with the petition shall be deemed to constitute compliance with the requirement to operate in accordance with a fugitive coal dust emissions control plan that contains one of the control measures specifically identified in paragraph (c)(2) of this section while the petition is pending.

(iv) If the petition is approved by the Administrator, the alternative control measures will be approved for inclusion in the fugitive coal dust emissions control plan for the affected facility. In lieu of amending this subpart, a letter will be sent to the facility describing the specific control measures approved. The facility shall make any such letters and the applicable fugitive coal dust emissions control plan available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(4) The owner or operator must submit the fugitive coal dust emissions control plan to the Administrator or delegated authority as specified in paragraphs (c)(4)(i) and (c)(4)(ii) of this section.

(i) The plan must be submitted to the Administrator or delegated authority prior to startup of the new, reconstructed, or modified affected facility, or 30 days after the effective date of this rule, whichever is later.

(ii) The plan must be revised as needed to reflect any changing conditions at the source. Such revisions must be dated and submitted to the Administrator or delegated authority before a source can operate pursuant to these revisions. The Administrator or delegated authority may also object to such revisions as specified in paragraph (c)(5) of this section.

(5) The Administrator or delegated authority may object to the fugitive coal dust emissions control plan as specified in paragraphs (c)(5)(i) and (c)(5)(ii) of this section.

(i) The Administrator or delegated authority may object to any fugitive coal dust emissions control plan that it has determined does not meet the requirements of paragraphs (c)(1) and (c)(2) of this section.

(ii) If an objection is raised, the owner or operator, within 30 days from receipt of the objection, must submit a revised fugitive coal dust emissions control plan to the Administrator or delegated authority. The owner or operator must operate in accordance with the revised fugitive coal dust emissions control plan. The Administrator or delegated authority retain the right, under paragraph (c)(5) of this section, to object

to the revised control plan if it determines the plan does not meet the requirements of paragraphs (c)(1) and (c)(2) of this section.

(6) Where appropriate chemical dust suppression agents are selected by the owner or operator as a control measure to minimize fugitive coal dust emissions, (1) only chemical dust suppressants with Occupational Safety and Health Administration (OSHA)-compliant material safety data sheets (MSDS) are to be allowed; (2) the MSDS must be included in the fugitive coal dust emissions control plan; and (3) the owner or operator must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants.

#### **§ 60.255 Performance tests and other compliance requirements.**

(a) An owner or operator of each affected facility that commenced construction, reconstruction, or modification on or before April 28, 2008, must conduct all performance tests required by § 60.8 to demonstrate compliance with the applicable emission standards using the methods identified in § 60.257.

(b) An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of § 60.8 and the methods identified in § 60.257 to demonstrate compliance with the applicable emissions standards in this subpart as specified in paragraphs (b)(1) and (2) of this section.

(1) For each affected facility subject to a PM, SO<sub>2</sub>, or combined NO<sub>x</sub> and CO emissions standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(1)(i) through (iii) of this section, as applicable.

(i) If the results of the most recent performance test demonstrate that emissions from the affected facility are greater than 50 percent of the applicable emissions standard, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(ii) If the results of the most recent performance test demonstrate that emissions from the affected facility are 50 percent or less of the applicable emissions standard, a new performance test must be conducted within 24 calendar months of the date that the

previous performance test was required to be completed.

(iii) An owner or operator of an affected facility that has not operated for the 60 calendar days prior to the due date of a performance test is not required to perform the subsequent performance test until 30 calendar days after the next operating day.

(2) For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in paragraphs (b)(2)(i) through (iii) of this section, as applicable, except as provided for in paragraphs (e) and (f) of this section. Performance test and other compliance requirements for coal truck dump operations are specified in paragraph (h) of this section.

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

(iii) An owner or operator of an affected facility continuously monitoring scrubber parameters as specified in § 60.256(b)(2) is exempt from the requirements in paragraphs (b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.

(c) If any affected coal processing and conveying equipment (e.g., breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems that commenced construction, reconstruction, or modification after April 28, 2008, are enclosed in a building, and emissions from the building do not exceed any of the standards in § 60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

(d) An owner or operator of an affected facility (other than a thermal dryer) that commenced construction, reconstruction, or modification after April 28, 2008, is subject to a PM emission standard and uses a control device with a design controlled potential PM emissions rate of 1.0 Mg (1.1 tons) per year or less is exempted from the requirements of paragraphs

(b)(1)(i) and (ii) of this section provided that the owner or operator meets all of the conditions specified in paragraphs (d)(1) through (3) of this section. This exemption does not apply to thermal dryers.

(1) PM emissions, as determined by the most recent performance test, are less than or equal to the applicable limit,

(2) The control device manufacturer's recommended maintenance procedures are followed, and

(3) All 6-minute average opacity readings from the most recent performance test are equal to or less than half the applicable opacity limit or the monitoring requirements in paragraphs (e) or (f) of this section are followed.

(e) For an owner or operator of a group of up to five of the same type of affected facilities that commenced construction, reconstruction, or modification after April 28, 2008, that are subject to PM emissions standards and use identical control devices, the Administrator or delegated authority may allow the owner or operator to use a single PM performance test for one of the affected control devices to demonstrate that the group of affected facilities is in compliance with the applicable emissions standards provided that the owner or operator meets all of the conditions specified in paragraphs (e)(1) through (3) of this section.

(1) PM emissions from the most recent performance test for each individual affected facility are 90 percent or less of the applicable PM standard;

(2) The manufacturer's recommended maintenance procedures are followed for each control device; and

(3) A performance test is conducted on each affected facility at least once every 5 calendar years.

(f) As an alternative to meeting the requirements in paragraph (b)(2) of this section, an owner or operator of an affected facility that commenced construction, reconstruction, or modification after April 28, 2008, may elect to comply with the requirements in paragraph (f)(1) or (f)(2) of this section.

(1) Monitor visible emissions from each affected facility according to the requirements in paragraphs (f)(1)(i) through (iii) of this section.

(i) Conduct one daily 15-second observation each operating day for each affected facility (during normal operation) when the coal preparation and processing plant is in operation. Each observation must be recorded as either visible emissions observed or no visible emissions observed. Each

observer determining the presence of visible emissions must meet the training requirements specified in § 2.3 of Method 22 of appendix A-7 of this part. If visible emissions are observed during any 15-second observation, the owner or operator must adjust the operation of the affected facility and demonstrate within 24 hours that no visible emissions are observed from the affected facility. If visible emissions are observed, a Method 9, of appendix A-4 of this part, performance test must be conducted within 45 operating days.

(ii) Conduct monthly visual observations of all process and control equipment. If any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible.

(iii) Conduct a performance test using Method 9 of appendix A-4 of this part at least once every 5 calendar years for each affected facility.

(2) Prepare a written site-specific monitoring plan for a digital opacity compliance system for approval by the Administrator or delegated authority. The plan shall require observations of at least one digital image every 15 seconds for 10-minute periods (during normal operation) every operating day. An approvable monitoring plan must include a demonstration that the occurrences of visible emissions are not in excess of 5 percent of the observation period. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. The monitoring plan approved by the Administrator or delegated authority shall be implemented by the owner or operator.

(g) As an alternative to meeting the requirements in paragraph (b)(2) of this section, an owner or operator of an affected facility that commenced construction, reconstruction, or modification after April 28, 2008, subject to a visible emissions standard under this subpart may install, operate, and maintain a continuous opacity monitoring system (COMS). Each COMS used to comply with provisions of this subpart must be installed, calibrated, maintained, and continuously operated

according to the requirements in paragraphs (g)(1) and (2) of this section.

(1) The COMS must meet Performance Specification 1 in 40 CFR part 60, appendix B.

(2) The COMS must comply with the quality assurance requirements in paragraphs (g)(2)(i) through (v) of this section.

(i) The owner or operator must automatically (intrinsic to the opacity monitor) check the zero and upscale (span) calibration drifts at least once daily. For particular COMS, the acceptable range of zero and upscale calibration materials is as defined in the applicable version of Performance Specification 1 in 40 CFR part 60, appendix B.

(ii) The owner or operator must adjust the zero and span whenever the 24-hour zero drift or 24-hour span drift exceeds 4 percent opacity. The COMS must allow for the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified. The optical surfaces exposed to the effluent gases must be cleaned prior to performing the zero and span drift adjustments, except for systems using automatic zero adjustments. For systems using automatic zero adjustments, the optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(iii) The owner or operator must apply a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. All procedures applied must provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photodetector assembly.

(iv) Except during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments, the COMS must be in continuous operation and must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(v) The owner or operator must reduce all data from the COMS to 6-minute averages. Six-minute opacity averages must be calculated from 36 or more data points equally spaced over each 6-minute period. Data recorded during periods of system breakdowns, repairs, calibration checks, and zero and span adjustments must not be included in the data averages. An arithmetic or integrated average of all data may be used.

(h) The owner or operator of each affected coal truck dump operation that commenced construction, reconstruction, or modification after April 28, 2008, must meet the requirements specified in paragraphs (h)(1) through (3) of this section.

(1) Conduct an initial performance test using Method 9 of appendix A-4 of this part according to the requirements in paragraphs (h)(1)(i) and (ii).

(i) Opacity readings shall be taken during the duration of three separate truck dump events. Each truck dump event commences when the truck bed begins to elevate and concludes when the truck bed returns to a horizontal position.

(ii) Compliance with the applicable opacity limit is determined by averaging all 15-second opacity readings made during the duration of three separate truck dump events.

(2) Conduct monthly visual observations of all process and control equipment. If any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible.

(3) Conduct a performance test using Method 9 of appendix A-4 of this part at least once every 5 calendar years for each affected facility.

#### **§ 60.256 Continuous monitoring requirements.**

(a) The owner or operator of each affected facility constructed, reconstructed, or modified on or before April 28, 2008, must meet the monitoring requirements specified in paragraphs (a)(1) and (2) of this section, as applicable to the affected facility.

(1) The owner or operator of any thermal dryer shall install, calibrate, maintain, and continuously operate monitoring devices as follows:

(i) A monitoring device for the measurement of the temperature of the gas stream at the exit of the thermal dryer on a continuous basis. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 1.7^{\circ}\text{C}$  ( $\pm 3^{\circ}\text{F}$ ).

(ii) For affected facilities that use wet scrubber emission control equipment:

(A) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 1$  inch water gauge.

(B) A monitoring device for the continuous measurement of the water supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 5$  percent of design

water supply pressure. The pressure sensor or tap must be located close to the water discharge point. The Administrator shall have discretion to grant requests for approval of alternative monitoring locations.

(2) All monitoring devices under paragraph (a) of this section are to be recalibrated annually in accordance with procedures under § 60.13(b).

(b) The owner or operator of each affected facility constructed, reconstructed, or modified after April 28, 2008, that has one or more mechanical vents must install, calibrate, maintain, and continuously operate the monitoring devices specified in paragraphs (b)(1) through (3) of this section, as applicable to the mechanical vent and any control device installed on the vent.

(1) For mechanical vents with fabric filters (baghouses) with design controlled potential PM emissions rates of 25 Mg (28 tons) per year or more, a bag leak detection system according to the requirements in paragraph (c) of this section.

(2) For mechanical vents with wet scrubbers, monitoring devices according to the requirements in paragraphs (b)(2)(i) through (iv) of this section.

(i) A monitoring device for the continuous measurement of the pressure loss through the venturi constriction of the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 1$  inch water gauge.

(ii) A monitoring device for the continuous measurement of the water supply flow rate to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 5$  percent of design water supply flow rate.

(iii) A monitoring device for the continuous measurement of the pH of the wet scrubber liquid. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 5$  percent of design pH.

(iv) An average value for each monitoring parameter must be determined during each performance test. Each monitoring parameter must then be maintained within 10 percent of the value established during the most recent performance test on an operating day average basis.

(3) For mechanical vents with control equipment other than wet scrubbers, a monitoring device for the continuous measurement of the reagent injection flow rate to the control equipment, as applicable. The monitoring device is to be certified by the manufacturer to be accurate within  $\pm 5$  percent of design injection flow rate. An average reagent

injection flow rate value must be determined during each performance test. The reagent injection flow rate must then be maintained within 10 percent of the value established during the most recent performance test on an operating day average basis.

(c) Each bag leak detection system used to comply with provisions of this subpart must be installed, calibrated, maintained, and continuously operated according to the requirements in paragraphs (c)(1) through (3) of this section.

(1) The bag leak detection system must meet the specifications and requirements in paragraphs (c)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (mg/dscm) (0.00044 grains per actual cubic foot (gr/acf) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.*, using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (c)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator must not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (c)(2)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (c)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation

and alarm may be shared among detectors.

(2) The owner or operator must develop and submit to the Administrator or delegated authority for approval a site-specific monitoring plan for each bag leak detection system. This plan must be submitted to the Administrator or delegated authority 30 days prior to startup of the affected facility. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (c)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (c)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow the owner and operator more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (c)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

#### § 60.257 Test methods and procedures.

(a) The owner or operator must determine compliance with the applicable opacity standards as specified in paragraphs (a)(1) through (3) of this section.

(1) Method 9 of appendix A-4 of this part and the procedures in § 60.11 must be used to determine opacity, with the exceptions specified in paragraphs (a)(1)(i) and (ii).

(i) The duration of the Method 9 of appendix A-4 of this part performance test shall be 1 hour (ten 6-minute averages).

(ii) If, during the initial 30 minutes of the observation of a Method 9 of appendix A-4 of this part performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.

(2) To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs (a)(2)(i) through (iii) must be used.

(i) The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.

(ii) The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.

(iii) The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.

(3) A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs (a)(3)(i) through (iii) of this section are met.

(i) No more than three emissions points may be read concurrently.

(ii) All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that

the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

(b) The owner or operator must conduct all performance tests required by § 60.8 to demonstrate compliance with the applicable emissions standards specified in § 60.252 according to the requirements in § 60.8 using the applicable test methods and procedures in paragraphs (b)(1) through (8) of this section.

(1) Method 1 or 1A of appendix A-4 of this part shall be used to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(2) Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A-4 of this part shall be used to determine the volumetric flow rate of the stack gas.

(3) Method 3, 3A, or 3B of appendix A-4 of this part shall be used to determine the dry molecular weight of the stack gas. The owner or operator may use ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses (incorporated by reference—see § 60.17) as an alternative to Method 3B of appendix A-2 of this part.

(4) Method 4 of appendix A-4 of this part shall be used to determine the moisture content of the stack gas.

(5) Method 5, 5B or 5D of appendix A-4 of this part or Method 17 of appendix A-7 of this part shall be used to determine the PM concentration as follows:

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin. A minimum of three valid test runs are needed to comprise a PM performance test.

(ii) Method 5 of appendix A of this part shall be used only to test emissions from affected facilities without wet flue gas desulfurization (FGD) systems.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(iv) Method 5D of appendix A-4 of this part shall be used for positive pressure fabric filters and other similar

applications (e.g., stub stacks and roof vents).

(v) Method 17 of appendix A-6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used in Method 17 of appendix A-6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A-6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(6) Method 6, 6A, or 6C of appendix A-4 of this part shall be used to determine the SO<sub>2</sub> concentration. A minimum of three valid test runs are needed to comprise an SO<sub>2</sub> performance test.

(7) Method 7 or 7E of appendix A-4 of this part shall be used to determine the NO<sub>x</sub> concentration. A minimum of three valid test runs are needed to comprise an NO<sub>x</sub> performance test.

(8) Method 10 of appendix A-4 of this part shall be used to determine the CO concentration. A minimum of three valid test runs are needed to comprise a CO performance test. CO performance tests are conducted concurrently (or within a 60-minute period) with NO<sub>x</sub> performance tests.

#### **§ 60.258 Reporting and recordkeeping.**

(a) The owner or operator of a coal preparation and processing plant that commenced construction, reconstruction, or modification after April 28, 2008, shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

(3) The amount and type of coal processed each calendar month.

(4) The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.

(5) Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any

variance from the manufacturer's recommendations, if any, shall be noted.

(6) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g. objections, to the plan and any actions relative to the alternative control measures, e.g. approvals, shall be noted in the logbook as well.

(7) For each bag leak detection system, the owner or operator must keep the records specified in paragraphs (a)(7)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(8) A copy of any applicable monitoring plan for a digital opacity compliance system and monthly certification that the plan was implemented as described. Any variance from plan, if any, shall be noted.

(9) During a performance test of a wet scrubber, and each operating day thereafter, the owner or operator shall record the measurements of the scrubber pressure loss, water supply flow rate, and pH of the wet scrubber liquid.

(10) During a performance test of control equipment other than a wet scrubber, and each operating day thereafter, the owner or operator shall record the measurements of the reagent injection flow rate, as applicable.

(b) For the purpose of reports required under section 60.7(c), any owner or operator subject to the provisions of this subpart also shall report semiannually periods of excess emissions as follow:

(1) The owner or operator of an affected facility with a wet scrubber shall submit semiannual reports to the Administrator or delegated authority of occurrences when the measurements of the scrubber pressure loss, water supply flow rate, or pH of the wet scrubber liquid vary by more than 10 percent

from the average determined during the most recent performance test.

(2) The owner or operator of an affected facility with control equipment other than a wet scrubber shall submit semiannual reports to the Administrator or delegated authority of occurrences when the measurements of the reagent injection flow rate, as applicable, vary by more than 10 percent from the average determined during the most recent performance test.

(3) All 6-minute average opacities that exceed the applicable standard.

(c) The owner or operator of an affected facility shall submit the results of initial performance tests to the Administrator or delegated authority,

consistent with the provisions of section 60.8. The owner or operator who elects to comply with the reduced performance testing provisions of sections 60.255(c) or (d) shall include in the performance test report identification of each affected facility that will be subject to the reduced testing. The owner or operator electing to comply with section 60.255(d) shall also include information which demonstrates that the control devices are identical.

(d) After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the owner or operator of the

affected facility must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>. For performance tests that cannot be entered into WebFIRE (*i.e.*, Method 9 of appendix A-4 of this part opacity performance tests) the owner or operator of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.

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